Antiquity

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Editorial Notes

WITH this number ANTIQUITY completes its first year. The steady increase in circulation assures us that our venture is appreciated. On our side we shall maintain the present standard, both of matter and illustration. We have the satisfaction of knowing that our Review has made a place of its own among the journals of the day, and that the frankness of opinion which is one of its features is approved. It will be our endeavour in the coming years to justify the promises we have made. We take this opportunity of thanking, once and for all, our direct subscribers—the rock upon which ANTIQUITY is founded. Their direct support is essential for purely financial reasons, and it enables us to maintain an absolutely independent attitude.

A title-page, contents and index to the volume are included in this number. Subscribers who wish to have binding cases will be supplied by the printer, John Bellows, to whom application should be made. Further particulars will be found on the inner page of the cover.

This opportunity is also taken to remind readers that subscriptions to ANTIQUITY for 1928 will be due next March, when a form of renewal will be issued.

Our readers have responded with most gratifying liberality to the appeal inserted in the last number on behalf of the excavations at UR. Contributions amounting to nearly £300 have been received towards the British Museum share of the costs of the Joint Expedition and sufficient funds are now in sight to ensure a full season's work. Those who have contributed to this most important undertaking may feel assured that their help has been deeply appreciated both by the Director and Trustees of the British Museum, and by members of the excavating staff at Ur, who can now carry out this season's programme unhampered by financial worry. We shall keep our readers fully informed of the results, as soon as these become available.

The first stage of the STONEHENGE campaign has been completed, and the land on which the aerodrome stands has been acquired by the National Trust. The work of demolition has already begun, and the contractors have undertaken to remove the eyesore within a year. The next stage, however, has opened with a renewed appeal to complete the purchase of the threatened land. That the threat is no imaginary one is shown by several facts. One is the existence of the odious café. Another is the revelation that, had not one of the options been secured when it was (by the public-spirited action of an individual), the land would have been acquired for a *factory!* The Avenue field, immediately opposite Stonehenge, still remains outside the fold of the National Trust, and the time is getting short. Subscriptions are urgently needed (National Trust, 7 Buckingham Palace Gardens, S.W. 1). We assure our readers that we should not ask for their support if the need were not really urgent, and, speaking with full knowledge of what is being done, we can tell them that it is, and that every shilling will be acceptable.

The excavation of WOODHENGE has been completed by Captain and Mrs Cunnington, who read a paper at the British Association Meeting at Leeds (6 September). It was published in full in the *Wiltshire Gazette* (Devizes, 8 September), illustrated by a large plan. The conclusions reached with regard to the exact date of Woodhenge were based on the pottery found, but, after seeing the pottery, we

cannot possibly accept the date assigned to it by Mrs Cunnington. The result will be published in book form, so that an opportunity of criticism will arise later.

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Perhaps an apology may be needed for referring again to GLOZEL. We do so, however, for the benefit of those who may not see the European papers. Since our last number appeared there has been quite a storm. It began with a report delivered by M. Dussaud to a meeting of the Academy at Paris, held behind closed doors. M. Dussaud made accusations of forgery, based upon his study of the inscribed clay tablets. The gist of his report was published, however, in the press; and a newspaper controversy developed. The affair assumed such proportions that the Government intervened and sequestrated the site and the 'finds'. Monsieur Herriot appointed a Commission to investigate, and no further work may be carried out except by them or under their supervision. Just before this, another Commission had been appointed by the International Institute of Anthropology and Archaeology. This International Commission is digging at Glozel as we go to press; Miss Garrod is the British representative.

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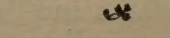
For the benefit of the daily press, both here and abroad, we state the relative order of certain events. GLOZEL was first publicly denounced as a forgery in the March and June numbers of ANTIQUITY. In July M. Vayson de Pradenne published the indictment referred to in our last number (p. 260); and on 16 September M. Dussaud entered the lists with his Academy report. In being actually the first to warn our readers and the rest of the world of this mare's nest, we may claim to have even exceeded the undertaking we gave in our first number. Although the paper by M. Vayson de Pradenne appeared soon after our own, he formed his opinion quite independently; neither of us was aware of the other's writings or existence until the end of July last. M. Dussaud's opinions have recently been published in the form of a pamphlet. ('Autour des Inscriptions de Glozel,' par René Dussaud, Librairie Armand Colin, 103 Boulevard S. Michel, Paris. Pp. 57). This should be read in conjunction with M. Vayson's articles in 'Les tablettes d'Avignon' (1 October) and in the *Bulletin de la Soc. Préh. française* (September).

AIR-PHOTOGRAPHY continues to provide sensational discoveries. The remarkable circles near Dorchester (Oxon), reproduced on the plates accompanying the note in this number (p. 469), were spotted by the pilot and observer who were taking some practice photographs there. Although outside the area to be covered, they went out of their way to include the circles, suspecting that they would be of archaeological interest. The results fully justified their enterprise ; they are the first-fruits of the instructions issued recently by the Air Council, encouraging the selection of archaeological sites for photographical exercises. This concession was made to a deputation received by the Colonial Secretary and the Air Minister, which included the Presidents of the Royal Geographical Society and of the Society of Antiquaries of London. All archaeologists will be grateful to the Minister for sanctioning such an arrangement as this, which will most certainly yield important new discoveries without involving additional expenditure of any kind whatever. All that is required now is for a few more enthusiasts to do what no one on the ground can do—that is, look out for, and photograph some more of these sites revealed by crops. This can best be done in May and June. The Thames valley between Oxford and Wallingford, especially the middle portion near Dorchester, is certain to contain many more; they were even observed on the ground by the late Professor Haverfield. Another dry year like 1921 is due again about 1930 or 1931 and should produce a bumper harvest of ' crop-sites '—if not of crops !



The new arrangement applies abroad as well as at home. That again is excellent, for in no part of the world is there more scope for archaeological air-photography than in the Middle East, where the new art was first put into practice. As we write these words a letter comes from Squadron-Leader Insall, V.C., the discoverer of Woodhenge, who is now stationed in Iraq. There in the desert he has been making discoveries which our readers will hear about—and see—in the next number of ANTIQUITY. He has visited and photographed the 'Works of the Old Men' in the basalt country, described by Flight-Lieutenant Maitland in our June number ; and at the time of writing was hoping for an opportunity of further research and photography in Iraq itself.

PLATE I

OULED MANSOUR FROM THE SOUTH-WEST
Ph. M. W. Hilton-Simpson

facing p. 389

Algerian Hill-forts of today

by M. W. Hilton-Simpson

IT is not easy to compare the existing hill-top villages of Algeria with the prehistoric settlements of Britain before the Roman invasion.

The writer cannot claim any profound knowledge of British archaeology, but seven winters spent among the Shawiya Berbers of the Aures mountains in south-east Algeria have enabled him to observe modern life in that country, and to form opinions on the origins of its customs. The extent to which that life may serve to illustrate the mode of existence of our forbears in pre-Roman times must be left to the consideration of those more familiar with the prehistory of Britain.

The mountainous massif of the Aures, less than one hundred miles square, lies on the fringe of the Sahara between that desert and the central Algerian plateau. From Biskra, a few miles to the south-west, tourists annually gaze with admiration upon the glories of the setting sun, reflected from the barren and precipitous slopes of the mountains. The country is difficult of access, even now that roads have begun to penetrate it from the north. Within its forbidding frontiers[1]—natural fortress-walls of rock—the ancient Berber race has from time immemorial lived its life less affected by outer influences than in any other part of Algeria.

This paper is mainly concerned with the villages of the Aures hills, to understand which we must consider the individual dwellings which compose them.

The human habitations of Algeria may be said to be roughly divided into five categories ; the worsted tent of the desert nomads, the house of mud-brick (reminiscent of Pharaohnic times) so characteristic of the Saharan oases, the grass-shelter—known as 'gourbi'—to be found in the north, the cliff-dwelling, consisting merely of a walled-up cleft in the natural face of a rock, and the

[1] For geographical details see Hilton-Simpson, 'Influence of its geography on the people of the Aures massif, Algeria', *Geographical Journal*, lix, 19.

flat-roofed hut built of untrimmed stones roughly held together by means of a 'mortar' composed of mud. This last is a feature of the hill-top villages now described.

There seems to me a connexion between the stone hut and the cliff-dwelling, a sort of evolution from the cavern to the house. To this evolution I have referred elsewhere.[2] If such a connexion, or evolution, exists it scarcely affects the modern hill-top village of the Aures; the walled-up cleft, palaeolithic in its simplicity, should be the subject of a separate paper.

The Shawiya hut in its simplest form consists of a rectangular edifice of unhewn stones, collected locally and united with mud, 'bonding timbers' of rough juniper logs being often built horizontally into the walls to give the building a certain amount of stability. Roofs are flat and consist of a thick layer of mud laid upon laths of oleander branch or palm mid-rib supported by rafters of juniper or date-palm. In all but the smallest of dwellings (in which rafters can be found long enough to span securely the space between their walls), these rafters are themselves supported by one or more posts of juniper or palm trunk, crowned by capitals of the same material, in the centre line of the building.

A poor family occupying a small hut usually sleeps upon a raised platform of sticks constructed across one end of the building, their few sheep, goats and fowls spending the night beneath them and thus, by their natural heat, protecting their owners against the cold of winter in the Aures highlands. It is, perhaps, needless to point out how much or how little—beyond heat—these animals and fowls contribute to the comfort of those who sleep above them. Those of us who live in Shawiya houses know; those who have not done so can easily imagine!

Such, in its simplest form, is the unit of which a Shawiya village is composed.

The villages invariably occupy the best positions for defence that the neighbourhood affords, and the geography of the Aures (described in some detail in the *Geographical Journal*, already referred to) provides innumerable sites almost impregnable to a foe armed with anything less modern than artillery. The rocky valleys of the massif's paltry mountain torrents are always very steep-sided and sometimes, as in the Rasira cañon, mere precipitous chasms in the centre of a wider

[2] *Geographical Journal*, lix, 24.

PLATE II

OULED MANSOUR FROM THE SOUTH-EAST
showing houses on edge of cliff
Ph. M. W. Hilton-Simpson

facing p. 390

vale,—chasms cleft in the course of ages by the swift-flowing streams themselves. The junction between a main valley or cañon and the now dry bed of a tributary stream provides an ideal position for defence, and the Shawiya have made the most of the terrain with which nature has provided them.

In one district, that of Ouled Mansour, the lip of the Rasira ravine is fringed with hamlets clinging like eyries to its barren rocks, and often from three to four hundred feet above their gardens beside the stream.

At first glance it may appear that such scenery and that of, say, a southern English landscape have little in common and that therefore life in a village of the Aures and in one of pre-Roman Britain can have so little relation that no comparison between the two can be possible. But is this really so?

It seems to me that both Shawiya and ancient Briton each chose for his village the most defensible site which his local geography allowed him. Geography was kinder to the Berber, that is all; the south-eastern Briton had to make the best of his area; and in the days of primitive weapons a position upon the meanest eminence put the defender in the place of the 'top dog' and greatly increased the difficulties of the attack.

Many of us have cause to remember the importance even under modern conditions of gaining or holding the most insignificant of the Flanders 'ridges' or 'hills'. The principle underlying the choice of a village-site must have been identical in the case of the Berber and the southern Briton, and though, of course, for the construction of their houses different materials were employed—stone in the Aures, where the Berber could not excavate a dwelling in the solid rock, and Mother Earth or wattle-and-daub in England—each used the material nearest to hand. It appears, therefore, that conditions of life in the Aures must have been (and indeed are) very similar to those prevailing in even the least mountainous parts of early Britain.

When I reflect upon the 'cliff castles'[3] of the coasts of Cornwall, Wales, western Scotland and Ireland I am driven to the conclusion that life in those castles must have been almost identical with that lived by the Shawiya today, or, at least, until less than a century ago. Their defensive positions must have been so nearly alike that the only outstanding difference lies in the fact that whereas the Briton sometimes

[3] A. Hadrian Allcroft, *Earthwork of England*, 49 *sqq.*

used earth for his fortifications the Shawiya, having no earth upon his rocky promontory, uses his superabundant stones to shield him from his foes.

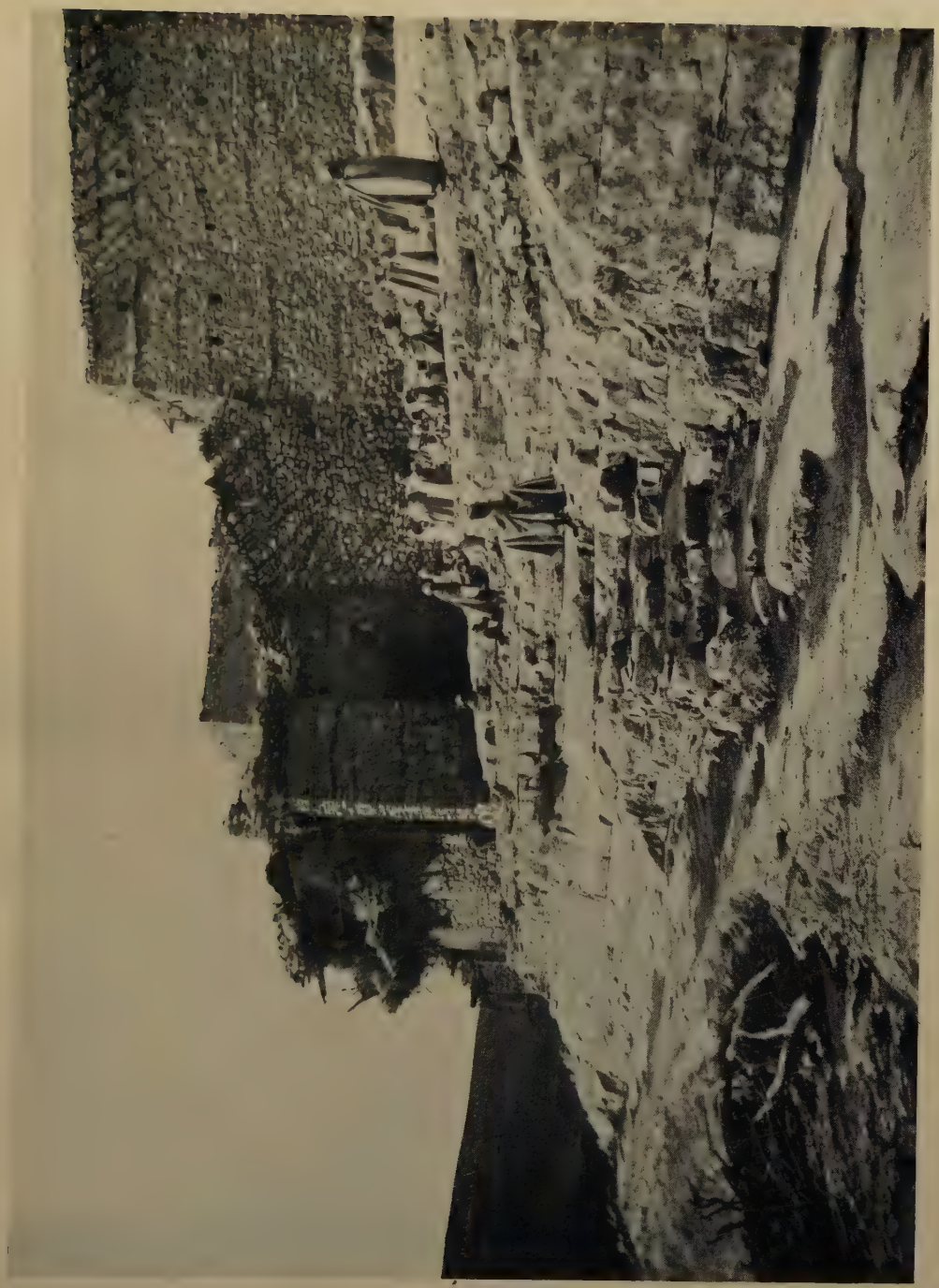
Having broadly described the general situation of modern Shawiya settlements and suggested that a study of them may possibly throw some light upon the conditions of life in ancient Britain I will take, for description in fuller detail, the village of Ouled Mansour in the Rasira cañon.

The Rasira stream, which varies from the merest brook in the height of summer to a roaring torrent in the early spring, flows south-westwards from the snows of the northern Aures to disappear in the vast wilderness of the Sahara a little to the east of Biskra. Throughout the latter part of its passage it has carved for itself—as with a gigantic plough—a deep furrow in the centre of a stony valley between two ranges of hills.

Ouled Mansour (plate I) is built upon the flat rocky surface of the apex formed by the junction of this Rasira cañon and the precipitous valley of a lesser and tributary stream, the latter now rarely blessed with even a trickle of water. The village overlooks its narrow belt of date groves, fields, and gardens which fringe the stream four hundred feet below it. It is rendered unapproachable by precipitous cliffs on either flank of the spur, and its only vulnerable point is the base of the triangle formed by the rocky apex of the spur, upon what we may term—for want of a better expression—its 'land' side. This is defended by a lofty wall of stone—in reality the back of a number of its dwellings—which spans the spur from cliff to cliff and is penetrated by but one narrow gateway, a path easily held by few against many.

The back walls of the houses flanking the spur rise straight from the edge of the cliff, admitting of no passage around the outside of the settlement. The outer walls contain of course no doors, and are penetrated only by a few totally inaccessible 'perforations' which serve as ventilators rather than as windows, in our sense of the word. (Plate II). Indeed, so abruptly do the walls of Shawiya huts rise from the brink of the precipice on which they stand, that I have, in several villages, observed these walls of stone actually resting upon stout logs which spanned crevices in the rock below. It is obvious that villages situated like this must be restricted in their superficial area; the farther back from the apex of the triangle that the dwellings are erected, the wider—and so the less defensible by a small force—must be the base of that triangle, its only vulnerable side. This has led the village to expand

PLATE III



OULED MANSOUR
Meeting-place, showing single gateway of village
Ph. M. W. Hilton-Simpson

facing p. 392

traveller must worm his way through a tunnel of natural rock to find himself upon the level apex of the spur on which the village stands. The impossibility of assault by means of such a path is obvious. Indeed it seems almost incredible that the women of Ouled Mansour should daily wend their weary way up such a precipitous track, bearing on their backs heavy goatskins full of water from the stream and bulky bundles of fuel wood from their gardens beneath ; yet they do this and actually seem to prefer this approach to the longer mule-path leading to the gate.

The settlement described contains all the salient features of a typical Shawiya village but, of course, geographical conditions vary in the Aures and some sites are less suitable for defence. For example Menaa, built upon a rocky knoll in the midst of a basin formed by the junction of two considerable streams, must (as plate IV shows) almost be regarded as an 'open town' when compared with such a fortress as Ouled Mansour.

Many villages are situated upon a rocky peninsula connected only by a narrow and lofty isthmus with some adjacent mountain. Such positions are very strong and have been favourites with the Berbers since the days when Sallust described Rome's struggle with Jugurtha.

One Shawiya hill-top settlement so far exceeds in inaccessibility all the many others in which I have lived that it may be briefly described.

The remains of the village of Djemina stand upon a lofty bluff, the summit of which is roughly triangular. The photograph (plate V), taken from the south, shows the apex crowned by the ruins of huts.

The ruins are inhabited only by the occupants of its numerous bee-hives and by a few goats. For just as in Britain, when Rome had established law and order in the land, people began to descend from their strongholds and to live in open villages scattered over the lower ground, so in Algeria the coming of Latin rule as represented by the French is slowly causing the Shawiya to desert the eyries upon their rocky crags ; indeed some scattered dwellings in quite open positions can be seen just above the palm groves in the illustration of Ouled Mansour.

The bluff is separated by the narrowest of chasms, a mere slit cut by the stream which flows through it, from a range of cliffs of about equal height—shown on the left of the photograph—of which the bluff must once have formed a spur. But although a huge pillar of rock, having fallen away from the cliff, leans against the summit, thus causing

PLATE IV

MENAA FROM THE WEST
Ph. M. W. Hillon-Simpson

facing p. 394

the stream to flow through a natural tunnel, the bluff itself is quite unapproachable from the cliff edge. All its three sides are absolutely sheer. Beside the leaning pillar there exists a vertical crevice in the wall; up this crevice (or 'chimney') some barefooted Shawiya mountaineer, with cat-like agility, once climbed and attached to the summit of the bluff a rope of plaited halfa-grass, allowing its end to trail down the crevice as an aid to others in repeating his climb up the sheer and sometimes over-hanging rock.

By means of this rope the younger and more active men can, with difficulty, reach the village. These, with the aid of stout cords of halfa, haul up the aged, the infirm, the women and children, sheep and goats, to a projecting platform of logs built for the purpose. This done, and the rope in the crevice drawn up, the inhabitants of Djemina are completely cut off from the world; absolutely defended against any foe not provided with the most modern instruments of war.

I have never seen a village site which, for its grandeur, impressed me more, nor one which, with the deep green of the date-palms beneath it contrasting with the yellow hues of the sunlit cliffs behind them, surpassed it in rugged beauty. Not only do the villages of the Aures delight the traveller's eye by reason of their wild and picturesque surroundings, but they afford him an interesting glimpse of the conditions of life in Algeria in the far distant past. The characteristic features of 'peninsular' and 'spur' villages as well as that of Djemina inevitably recall the words of Sallust[4] when he described the taking of Jugurtha's treasure-house on the Moroccan frontier about half a century before Christ; approximately at the time when Britain first felt the touch of Roman influence. The relevant passage, as translated by Pollard, is as follows:—

'There rose amid the surrounding plain a rocky mountain, broad enough at the summit for a fort of moderate size, and reaching to an immense height. A single narrow approach was left; all the rest was as precipitous naturally as if labour and design had been employed to form it. . . . The path used by the garrison was extremely narrow, with a sheer descent on either side.'

So strikingly did the villages of the Aures remind me of Sallust's words that, when reading a paper on that country before the Royal Geographical Society,[5] I attempted to illustrate them by means of

[4] *Jugurthine War*, xcii.

[5] *Geographical Journal*, l.c.

slides depicting hill-settlements in which I had lived. Indeed, I believe that any future visitor to the Shawiya country who carries with him Sallust's narrative of the taking of Jugurtha's fort will find, when standing beneath many modern Berber hamlets, that it will perhaps reveal to him conditions of warfare in Roman and pre-Roman times more vividly than any phase of such life has been revealed to him before.

The existing arts and crafts, manners and customs of the Shawiya Berbers are very ancient and, therefore, must surely throw light upon those of the Mediterranean world of far distant days enabling us eventually to show that modern Shawiya culture dates back, at least, to pre-Roman times. The geographical isolation of their country is largely responsible for this state of affairs, but there has been (until the French pacified the remoter areas of Algeria) another contributory cause—namely the ever-present imminence of war. I do not mean war on the grand scale, as waged by Rome against Jugurtha, but the far lesser ' affairs' such as have constantly recurred throughout North Africa and which would undoubtedly recur again were European rule to be removed.

From time immemorial struggles have been the rule rather than the exception. The Berber of the Aures has had to combat the Arab of the plains, who ever coveted—and still covets—the produce of his more fertile fields ; within the massif itself Shawiya tribe has ever been at variance with Shawiya tribe—village with village, even family with family.

The conflict between Berber and Arab originated in the natural hatred of the free men of the hills for their would-be conquerors of alien race ; probably the internal bickerings of the Aures nearly all arose from blood feuds, initiated by some murderous crime of one family against another. However that may be, with warrior blood flowing in their veins for countless centuries, it is scarcely to be wondered at that the natives of North Africa have shown themselves to be soldiers of the highest quality from the time of Hannibal until quite recent times.

Until their natural instincts were turned to the best account by the discipline introduced by European officers, the tactics of the Berbers have been those of the 'light armed' as opposed to the 'hoplite'; of Hannibal's famous Numidian cavalry rather than of the chivalry of medieval Europe. Their warfare took the form of spasmodic raids rather than of organized campaigns culminating in

PLATE V

THE PINNACLE ON WHICH DJEMINA STANDS
Ph. M. W. Hilton-Simpson

facing p. 396

a decisive battle. Moreover, the numbers engaged on either side must certainly have been small, owing to the numerical weakness of the tribes or villages concerned. This must have been the case even in inter-racial conflicts—Arab versus Berber—for mutual distrust would preclude the formation of any considerable force on either side.

It will be apparent that the defensive positions chosen by the Shawiya, which I have endeavoured to describe, are ideal for protection against a mere raid. In a prolonged campaign the very strength of the eyries perched so far above the stream must in a few days of strife become a source of great weakness. The villages, easily defensible in themselves, are usually totally dependent for their water upon the stream, or springs adjacent to it, hundreds of feet below. It is true that a few hill-top villages are blessed with springs so near to them as to be easily reached in times of war without undue exposure to the water-carriers, who, in most cases, would be obliged to descend the precipitous tracks from their villages in single file ; according to Sallust Jugurtha's stronghold was so provided, and was thus enabled to withstand a protracted siege by the trained legionaries of Rome, equipped with a formidable siege-train. In most Shawiya villages water must be fought for, to cover a sortie, in the event of any prolonged attack ; for I have never seen any systematic attempt to store water other than in the goatskins in which it is still carried up by the women. These tend to leak, and moreover the water becomes undrinkable in a very short space of time, especially in hot weather.

This lack of water storage, in a country thoroughly accustomed to a state of war, has always been a mystery to me ; I can only conclude that desultory raids (productive, no doubt, of high feats of valour) have been met by equal forces (tribal or village) and have succeeded or failed at once, and that serious or prolonged campaigns can never have been usual in the Aures. The constant menace of hostilities, which would commence without the slightest warning, seems to account for the apparent idleness of the male population of a modern Shawiya settlement and, indeed, of that of the menfolk of a desert oasis.

The Shawiya entrusts his flock to a professional herdsman (who works for several masters) or to his own young children, for grazing on the hillside. Much, though by no means all, of the work in the gardens is carried out by women. The majority of the men seem to spend most of their time idling in the village itself, a fact which usually rouses the indignation of such few tourists as penetrate the hills. These very idlers appear to be the remnants of that garrison which must

have been indispensable to every Shawiya settlement in the past, and I am tempted to ask the indignant tourist whether he could care to see the men of our own garrisons scattered over the country in pursuit of civil occupations only to be called upon to defend him when the enemy had already struck his first blow.

It necessarily follows that, in a country liable to sudden outbreaks of war, each Shawiya village was, and had to be, as nearly self-supporting as it was possible to make it ; it is so to this day. Of course certain commodities had to be sought outside the limits of the hills, and parties of men still join forces to seek them with their pack-mules ; but brigandage has been known in the mountains until post-war years so that, even now, no Shawiya takes the road totally unarmed, be his weapon merely a cudgel.

To provide his home with the necessaries of life the Berber husbandman cultivates with the greatest care every scrap of irrigable soil adjacent to his settlement, employing a neat system of miniature canals and dividing their meagre waters by means of ingenious and very archaic methods of time measurement which I have described in detail elsewhere.[6] In some districts, such as at Menaa, a fairly broad basin at the junction of two streams provides him with a sufficient terrain and an admirable soil ; here he can, and does, show his qualities as a farmer, qualities which he probably possessed in some degree even before the arrival of the Phoenicians along the African coast.[7] In less favoured regions he has been forced to construct 'terrace fields' upon slopes of barren rock wherein to plant his crops, vegetables, fruit trees or date-palms.

In addition to the gardens near his village the Berber usually sows with cereals any patch of soil to be found high upon his mountain slopes, which he hopes may be watered by the all too scanty rainfall of the country.

With the exception of a few vegetables such as turnips, etc., the Shawiya produces nothing from his soil which he can export to his neighbours in the plains even in the present piping times of peace. But there is one commodity which he can and does produce for export, and that is honey. Certain neighbouring tribes of Barbary were famous for their honey even in the time of Herodotus,[8] and the Shawiya

[6] *Geographical Journal*, lix, 26 and lxiii, 426.

[7] Mommsen, *History of Rome*. (Everyman edition, ii, 9).

[8] IV, 194.

BEE-HOUSE, OULACH
Ph. M. W. Hilton-Simpson

facing p. 398

are no less so today. So numerous are their cylindrical hives of basketry that these are often stored in huts (plate VI) specially built to contain them stacked one upon another in rows, each hive with its entrance hole placed against a narrow opening in the wall of the hut, the honey being extracted from the opposite end of the hive without removing it from its position. Honey and walnuts, to be eaten together, form the dish which every Shawiya loves to place before a guest, and delicious they really are, especially in a land in which the native fare tries a European's gastric endurance to the utmost.

But if each village of the Aures is or has been practically self-supporting, the same may be said with equal accuracy of every individual Shawiya hut.

The Berber, being a Moslem, is allowed four wives, though for pecuniary reasons he rarely maintains more than one or two at a time. The women of his household, in addition to their natural tasks of cooking, tending the hut and rocking the baby in a basket-cradle slung from the roof, tan the goatskins in which they carry their water and in which, suspended from tripods, they churn the milk of their husbands' goats, sheep and, in some districts, of his very few dwarf cows. The women fashion the few simple cooking vessels of pottery each establishment requires, kneading the clay into the crude forms employed by hand without the use of a potter's wheel, thus keeping alive a method of potting which dates back to the very earliest times.

It is the women of the household, too, who weave upon a vertical loom the excellent woollen material, made from the handspun wool of the sheep, the ' burnouses '—or hooded cloaks—worn by the male population ; and, upon a horizontal loom, the coarser fabrics of goat's hair required for the sacks used for the transport of produce upon mule-back. Both these hand-looms are of very archaic form ; indeed they seem to me to resemble in the closest detail those depicted in use in ancient Egypt from fifteen to twenty centuries before our era.

The women grind the corn between the twin stones of a rotary hand-quern such as that to which Homer[9] apparently refers and which exactly resembles those used until the 19th century in certain parts of the British Isles. It is true that in certain valleys an ancient type of water-mill,[10] driven by a horizontal rimless wheel placed in the course

[9] *Odssey*, XX, 105, and there is further evidence for this.

[10] Described and illustrated in *Scottish Geographical Magazine*, XXXVIII, July 1922.

of a swift-flowing stream or canal, is used by professional millers who are paid a percentage of grain for their services, but the hand-quern is still the more generally employed. Like the hand-quern, the water-mill of Shawiya type is known in northern Europe even today, in Scandinavia and in the islands off the Scottish coast, or has been in use there until the last few years.

It seems possible that in remote ages the 'saddle-stone' method of grinding corn—as employed in ancient Egypt and in Britain—was used in the Aures ; I have seen gypsum powdered by means of it on many occasions ; but for the production of flour it has now completely disappeared.

The twin-stone querns (plate VII) are manufactured by the men in the very few villages of the Aures near which stone suitable for them can be quarried. They are distributed by sale throughout the massif and they constitute one of the only two manufactured products of the hills which are exported to the neighbouring desert and plateau in quantities sufficient to merit even a moment's consideration.

The other product is the flat wooden dish or bowl turned by means of a 'pole lathe' from the wood of the walnut trees common in parts of the Aures. The lathe upon which it is produced is identical in principle and almost identical in detail—as I have shown in a paper published in *Man* (1924, no. 40)—with the lathe used today in the turning of chair legs in Buckinghamshire. The ancestry of this appliance is still obscure, but the Shawiya and the English specimens so closely resemble one another that I am sure they must possess a common origin.

The simple carpentry of the hills is carried out by the men ; professional craftsmen exist in nearly every village. Although many of the tools they use nowadays are of European make, imported by itinerant pedlars from the centres of French civilization beyond the borders of the massif, yet they still employ, as their principal tool, a short-handled adze which strongly recalls the implements of the Bronze Age. It is now locally made of iron and closely resembles its prehistoric British predecessor.

I have traced in barest outline rather than depicted in detail the life lived by the Shawiya in the Aures hills today; but have dwelt at greater length upon the topography of Berber 'hill-top' villages and the now happily ended days of inter-tribal war ; for geographical conditions and the imminence of sudden strife have contributed, in perhaps equal degree, to the foundation of such settlements both in

PLATE VII

QUERN-MAKER, MENAA

Ph. M. W. Hilton-Simpson

By permission of the Royal Scottish Geographical Society

facing p. 400

modern Algeria and in pre-Roman Britain. In this belief I am strengthened by the following passage in Allcroft's *Earthwork of England* (p. 210) :—' Of sieges and blockades it is practically certain the prehistoric period knew nothing. A single rush, a succession of rushes, at most a day's assault, was all that was to be feared, and a hostile force would more often confine itself to desultory raids and cattle lifting. . .' This extract seems to me to indicate an exact parallel between the warfare of ancient Britain and of the Aures hills; a kind of warfare differing from that of by-gone days in New Zealand, described by Mr Raymond Firth in the first number of ANTIQUITY, in that, among the Maori, more or less prolonged sieges were not unusual ; yet it seems that the same difficulty with regard to water storage presented itself alike to the dweller in the Antipodes and to the Shawiya. With regard to the arts and crafts I have mentioned, perhaps I may be allowed to hold the opinion that a careful study of them would be of very great value to those attempting to reconstruct the life of early Mediterranean peoples ; whether or not they can throw any light upon life in ancient Britain students of British archaeology must decide.

Ithaka

by Alexander Shewan

THE island of Ithaka in the Ionian Sea has been famous throughout the centuries that have passed since European literature began with Homer. In itself it is small and mountainous, and but a poor spot on which to stage a noble drama, but its association with the far-famed hero of an immortal epic has more than made up for the insignificance of the terrain. In recent years it has achieved further distinction as the subject of a lively, and at times embittered controversy about its actual position on the map. Most scholars are content to believe that by Ithaka Homer meant the island which still bears the name, now modified to Thiaki; others affirm that the scene of the poet's story was really Santa Maura to the north, while others again have given the honour to Cefalonia to the west. Quite recently a German geographer has even proclaimed that 'Corfu is Ithaka.' Samuel Butler, in his famous Homeric escapade, convinced himself that Ithaka was to be found in one of the Aegadean Islands off the coast of Sicily. So far, it has not been said of it that it never existed save in the imagination of the poet,* but it may yet be the victim of that last infirmity of Homeric geographical speculation.

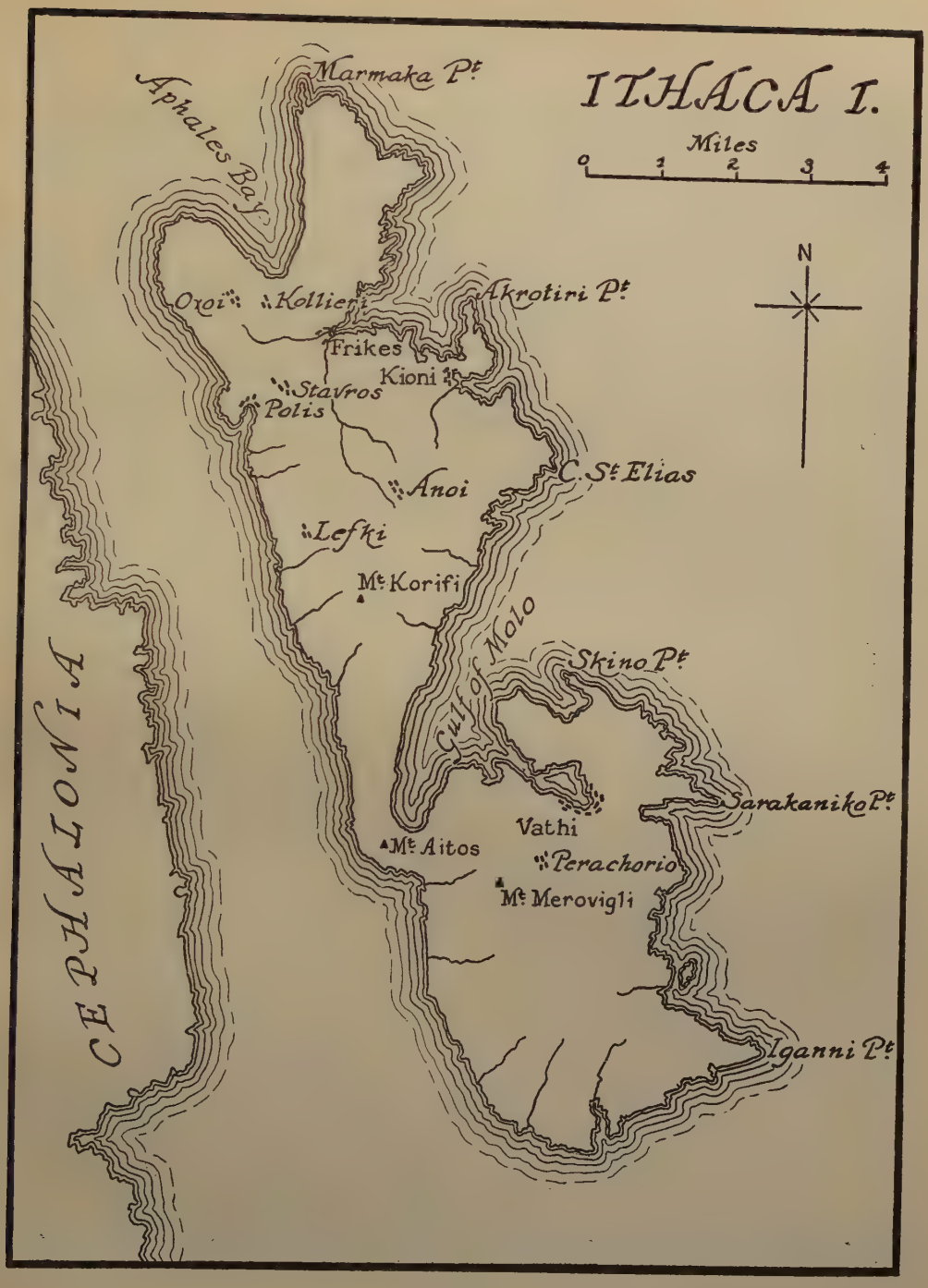
Interest in the island due to certain observations by the ancients was quickened by the visits of travellers—Gell, Dodwell, Leake, Mure and others—in the course of last century. The general aim of their explorations was to test the correctness of the Odyssean descriptions, and this they did with thoroughness. Their fault was that generally they went too far; they expected, and sought to establish, perfect correspondence. The modern expert comments that a poet is a poet; that freedom in his dealings with time and space is only his right; and that trifling discrepancies between the poetry and actuality are not to be regarded as vitiating the whole description and stamping it as purely

* Since this was written it has come to notice that Albert Herrmann, in a paper in the *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, 1926, states that all that is related about Ithaka by one of several poets whose contributions to the Odyssey he believes he can identify, 'existed only in the imagination' of that poet.

PLATE I

VIEW OF HARBOUR, ITHAKA

facing p. 402


ITHACA I.
Miles
0 1 2 3 4
N
Marmaka Pt
Aphales Bay
Oroi
Kollieri
Akrotiri Pt
Frikes
Kioni
Stavros
Polis
Anoi
C. St Elias
Lefki
Mt Korifi
Gulf of Molo
Skino Pt
Sarakaniko Pt
Vathi
Mt Aitos
Perachorio
Mt Merovigli
Iganni Pt
CEPHALONIA

imaginary. And all that may be conceded. The old explorers were certainly the victims of an excess of zeal. It has even been said that the inhabitants of the island made profit of their eagerness, by inventing names of localities to do duty as the remains of the appellations to be found in the epic.

In the course of time everything in the epics became suspect to the restless criticism of the Germans. With other matters, the geography and the topography were studied afresh, and with no benevolent intent, but rather with a determination to prove unreality and romance. Wondrous results were obtained. A notable instance is the Scheria of the Odyssey, which Bérard and others have proved to be Corfu, as the ancients believed. By fanciful interpretation of the epic data it was easily relegated to the limbo of fairydom as a mere 'Weissnichtwo,' or classed with other Isles of the Blest. Its people were Ferrymen of the Dead, or Spirits of the Winds or of the Waves. They were Dusky Men, or Men of the Light. Ulysses was the Sun God and Scheria the Realm of Darkness ; or the Spring God, who in an earlier 'version' of the Odyssey was mated with the Earth goddess Nausikaa. The results were extraordinary in their diversity, but one thing seemed certain to all these inquirers, that Scheria and the Phaeacians who peopled it belonged to the supernatural.

The scene of the Iliad passed through a similar experience. The fascination of Troyland for European scholars dates back to the days of Maclaren, Bryant and Morritt, when Byron called Bryant a blackguard, and described the Troad as 'a fine field for speculation—and snipe.' Speculation was continued by Hercher and Forchhammer, Brentano and von Eckenbrecher, while the pickaxes of Schliemann's workmen were striking secrets from the ruins of the castles of the Troad and the Argolid. The story is familiar from many handbooks ; the ridicule that compared the explorer's confidence to the 'childlike faith' of Gladstone, the astonished silence before the marvels that were unearthed, the explanations that were attempted, not without the imputation of fraud, and the eventual capitulation. And when the excavations in Crete had widened the view opened out by Schliemann, men were fain to admit that history had been enriched by a page that had been lost from her record.

The turn of Ithaka came in due course. The island had kept its name ; its identity had as yet hardly been questioned ; the characters and events of the Odyssey were specially human, and there was little room for any theory of the supramundane, and still less for the suggestion

that an Ithaka had never existed. But the feeling of the age was against the acceptance of any simple, natural explanation, and, for lack of a better subject, fixed on the topography, with the object of establishing discrepancies between the poetry and reality. It hoped to prove at least this much—that the Ithaka of the Odyssey was a locality with which the poet had no personal acquaintance.

Völcker had, in his *Homeric Geography* (1830), indicated some difficulties, but the formal attack was made nearly forty years later by Rudolf Hercher. He considered that it was impossible to adapt the Homeric description to the island of Ithaka; and this opinion became so popular, that he was encouraged to turn his attention to the Trojan Plain, where he had the same fancied but unreal success. His exploration of Ithaka was completed in one day and confined to the central portion, but the fate of the island was sealed. Hercher's essay has since been demolished by set replies in his own country, especially one by Partsch, an eminent geographer whom all participants in Ithakan controversy recognize as a high authority; and his theory is now chiefly of interest because it shows how easily men's minds were swayed in those days against anything in Homer.

The general accuracy of the Odyssean topography is not to be questioned. The differences between it and fact are not serious. In the first place, accurate descriptions of land and sea in the Mediterranean as these are known today to anyone who possesses an atlas, are not to be expected in an early epic ; and in the next place one must again insist on the right of a poet to depart from strict accuracy of description, if his tale require it. In short, such discrepancies as exist may be due either to inadvertence or to the deliberate use of the imagination. The former are negligible ; for the latter it is contended, in the words of Professor Bury, that, if imagination is at work, 'it confines itself within strict limits.' In Ithaka, a cave may not be quite so near the sea as the poet puts it, and distances traversed may not correspond to a furlong, but the fine safe havens, the Raven Rock and the Spring Arethusa, are where they are said to be, and the truth of the descriptions of the physical features of the island in two well-known passages, and the appropriateness of the Homeric epithets, are not to be denied.

Hercher's polemic having failed, it was suggested some years ago that a fresh presentation of his case might be made in the light of the newer information that has accumulated in sixty years, but none has appeared. Failing that, the general topographical correspondence must be deemed to be sufficient proof of the identity of the island, but other

objections are still insisted on. One which is based on an alleged inaccuracy in the description of the position of the island relatively to its neighbours, will be noticed further on. Another is that it is impossible to believe all that the poet describes could be found on the Ithaka of those early days. The difficulty is born of the habit of thinking of it as a little rocky isle, the 'barren crags' of Tennyson's poem, and of contemplating the bare brown humps that emerge from the sea in a modern bird's eye view of the island. To the minds that entertain this difficulty Homer has embellished without restraint. It is a common charge. The late Professor Mahaffy, for example, was particularly positive. To him the poet was, in regard to geography, 'a mere romancer,' and one who 'deliberately drew his pictures even of Greece, from fancy, and not from observation.' His illustration of this, no doubt one of the strongest he could select, was particularly unfortunate. He ridiculed the notion that a car could be driven, as it is in the Odyssey, from Pylus to Sparta, and the *géographes de cabinet*, as Bérard has styled one class of Homeric critics, concurred that this was beyond the bounds of possibility, till that French explorer showed to general satisfaction how the trip was accomplished. To any one who has driven a tonga, a two-wheeled vehicle which in its simplest form is a good reproduction of the Homeric chariot, through a mountainous tract in India, the difficulty involved is not of a serious nature.

But let us consider this objection further by reproducing in some detail the picture of Ithaka as given in the Odyssey. In Achaean days Ithaka must have been forest-clad, as the poem says it was, and must have enjoyed the fine climate which it still shares with the other Ionian Islands. We further read that it had 'unfailing watering-places,' and that in the forest there was 'wood of every kind.' A grove of poplars, with an altar of the Nymphs, surrounds the cistern which collects the water of a spring for public use. In a garden are the olive and the vine, the apple, the pear and the fig. Olive oil, 'perfumed,' is stored in the house of Ulysses, and his bedpost of olive wood is famous. The tree thrives in these islands. One mentioned in the Odyssey has not been found; it could hardly, as Gladstone observed, be there after three millennia, though he added that he had seen in Cefalonia the shell of one 'thirty-six feet in circumference, which may have been of any imaginable age.' Even now, when the destruction of the forest has left but scanty soil, the island produces olive oil and wine for export. And currants; a traveller has preserved the prayer of an old lady

resident that John Bull might never lose his love for plum-pudding, for it would be a sore blow to Ithaka if he did. If the island at the present day does not actually flow with milk and honey, neither, as has been said in this controversy, does Canaan.

That farming was of minor importance goes without saying, but there was a certain amount of tillage. Ulysses himself was a champion mower and plougher. Manure was stored. Mules were bred for ploughing. There was vegetable cultivation with the hoe. Athene's statement that there was 'any amount of food' produced perhaps refers chiefly to the cattle, goats and pigs. Their flesh was the principal article of diet, but the table was furnished in other ways. Poultry was kept; witness Penelope's geese. Birds were snared, and perhaps killed by falconry. Wild goats, small deer and hares were hunted with dogs. Hares are plentiful on the island still. Fish seem to have been caught by the rod and netted in the sea.

There was specialization of industry, and the craftsmen were in a manner public servants, as in Indian villages. With bard, seer and physician, the carpenter is named, and the smith has his smithy. The potter does not appear, but the big jars in the palace storeroom, which recall those unearthed in Crete, may have been of local make, for the potter's craft was general in Greece of the time and pottery a staple trade. Tools of various kinds were in use. Ships were 'many,' and may have been home made. There are numerous indications of luxury in dress, jewellery, and house furniture and utensils, and in the ornamentation of these with gold and ivory. Penelope's own chair, made by a famous artificer, was evidently a Sheraton piece of the day.

Again it has been remarked that there are, in Homer's pictures of life, many touches that are surprisingly modern. They are found even in the Iliad; they are of course more frequent, and more appealing, in the more domestic Odyssey. The old nurse lights her boy to bed and hangs up his clothes after smoothing out the creases, much as an old family retainer would do now. A visitor 'tips' the bathwoman and other domestics. The arrangement of house and furniture does not sound strange to modern ears. The housekeeper has her subordinates well in hand and sees they do their work, even to the sponging of the tables after one of the late nights of Penelope's wooers. Those tormentors of the queen amuse themselves with draughts, perhaps of the kind found in the Cretan palace, or quoits or light javelins. A father gives his little son certain fruit trees 'for his very own.' There

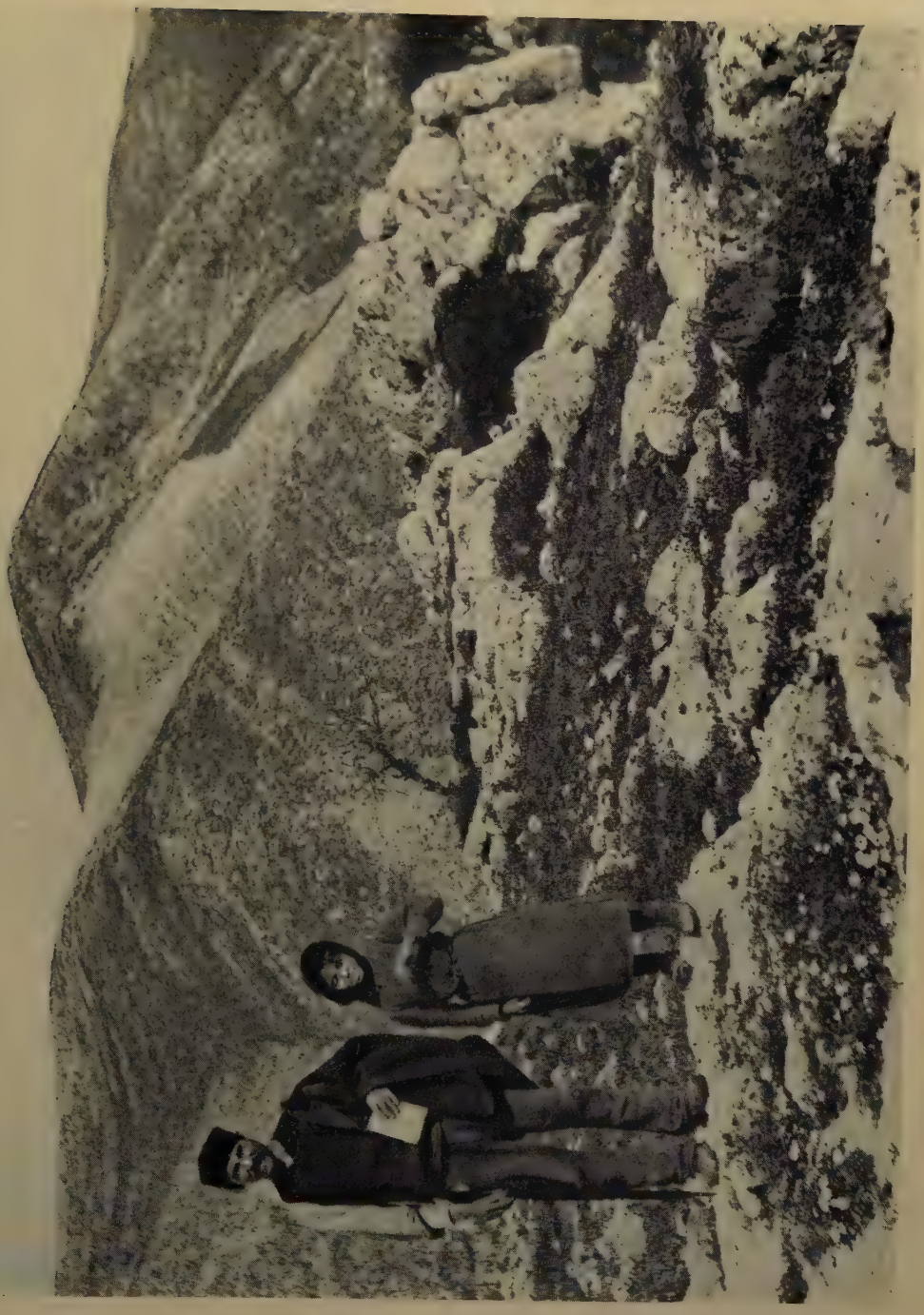
is in the town a *lesché*, a public house or lounge, where a wanderer can be accommodated if the smithy likes him not. And so on.

The above summary statement may be taken as indicating prima facie that there was no small degree of civilized comfort on the island, and that it had flourished under the benign sway of Ulysses. What were the sources of its prosperity ? One was its flocks and herds. The king himself was conspicuous for the great size of those he owned, and he had grazing rights, and something more, on the mainland. And there was commerce. For Ithaka was, we know, an important centre, or port of call, as the last stage on the voyage from Greece to Corfu and the West. It was also the chief town of a maritime kingdom. An Austrian admiral, the Archduke Ludwig Salvator, who is said to possess intimate knowledge of the Ionian Islands, and who investigated the matter in the course of prolonged visits, has declared that no better location for the capital of the island realm of Ulysses could have been selected than that where the Odyssey places the town of Ithaka.

Such is the Homeric picture. It is of course open to anyone to say that the whole is merely a poetical figment, but surely the view that it is, in large measure at least, a reproduction of fact is as sane an explanation. Many will think it unlikely that an old bard, singing to a courtly audience of the deeds of heroes, would say the thing that was not, not once but repeatedly, and to men who were doubtless well acquainted with the facts. And why should it surprise us if increasing knowledge of prehistoric conditions should establish still further the fidelity of the poet's description of Ithaka ? If the hero of the Odyssey himself, and Agamemnon and other great names, can be accepted by scholars of standing as real historical personages, it is surely not a far cry to the reality of the island scenes. There is good authority for the saying that 'Odysseus on Ithaka is not myth or saga at all.' 'It would be astonishing, even inhuman,' Dr Farnell has said, 'if none of the leading names of the agents in the war against Troy, or of the great royal dynasties of Mykenai, had been remembered and preserved.'

It is a prime difficulty with some that a mere tract of forest could not possibly attain to any considerable degree of material comfort and prosperity. There are regions in India, and doubtless in other parts of the earth, with rainfall, seasons and climate very similar to those of Ithaka, the inhabitants of which are singularly well off. Wood, water and grazing are plentiful, and cultivation, though limited to the area not under forest or scrub jungle, is carried on under easy conditions. And agriculture is not the only possible source of wealth to an island community.

PLATE II



VIEW IN THE MOUNTAINS OF ITHAKA

facing p. 408

Ithaka's troubles are not at an end even yet. In the beginning of this century a German scholar, Dr Wilhelm Dörpfeld, embracing a theory which had been previously hinted at in his own country, declared that by Ithaka Homer meant Leukadia, or S. Maura, a more northerly member of the island group. The new theory was mercilessly criticized, even in Germany, notably by von Wilamowitz, the present Rector of the University of Berlin, and the slender arguments on which it is based have been repeatedly refuted. To enter into much detail is here impossible, but some features of Dörpfeld's case may be mentioned. His starting-point is the assertion that the Odyssey assigns four islands as the kingdom of Ulysses. The poem gives no warrant for this, but, though the error has been pointed out more than once, it is not abandoned. Then a passage of the Odyssey which is highly inconvenient to the theory is rejected as late and spurious, and that old gazetteer of prehistoric Greece, the Catalogue of the Ships in the Iliad, is condemned as suffering from the same disability. And in order to fit the hypothesis to conditions in Greece as these are known from Greek literature—which, be it added, gives not the slightest hint of any connexion of Leukadia with Ulysses—a series of movements of peoples has to be postulated without any ground in history or tradition. Among individual arguments the principal is an alleged misdescription of the position of Ithaka relatively to the neighbouring islands. But, admitting it, what then ? Are we to expect from an old epic poet the accuracy required of a surveyor or geographer ? Caesar knew Britain, but his account of it is defective. Mure, the historian of Greek literature, has asked in this connexion if we are to deny to Scott acquaintance with Scotland ' because of an equal difficulty in identifying the bay of Ellangowan or the castle of Tillietudlem,' and Goethe's reply to those who haggled over the scene of the action of his *Hermann und Dorothea* is familiar. It is not an objection that will weigh with those who can suffer some geographical or topographical inexactitude in an old epic. Again, changes in physical conditions in the course of three thousand years are too lightly regarded. The level of the Mediterranean has risen, or the land has subsided, as has been shown for Tunisia, Crete and Italy ; coasts have suffered erosion ; forests have disappeared and water-supply has consequently shrunk or vanished ; and ports have been closed by silting. But more than this ; the theory was characterized by startling novelties. A familiar passage was interpreted in a way that had never occurred to any scholar, and words were forced to meanings that even the ancient commentators never

knew. The word for 'strait' had to be explained to include almost any stretch of water, and an epithet meaning 'very deep,' was translated, to the general amazement, by 'into-the-land-far-stretching,' and so on. The final deliverance of the author of the Leukas-Ithaka Question, as it is called, is soon to appear in book form, and the theory will doubtless receive its quietus.

It is a legacy from the close of a period when the Higher Criticism of Homer was running riot, but much that its patrons regarded as certain has been refuted or discredited. Such, to take a few examples, are the condemnation of books of the epics by methods and tests which will not bear scrutiny; the enucleation of poems and the discovery of old epics unknown to the ancients; 'the dreary occupation of proving all the heroes to be Faded Gods'; the ransacking of saga cycles to provide new combinations, and a consequent topsyturvydom whereby the Troica were transferred in their inception to Greece, and Hellenic origins were found for the heroes of Ilium. These little systems have had their day. The late Dr Leaf, who once believed in them, formally abjured their methods some years ago, and at the same time indicated a better way of dealing with the Homeric problem, 'to confront Homer with facts,' that is, by combining geography and archaeology.

Excavation has revealed much of the realities of the age of which Homer sings, and has dispelled many doubts. Traditions that were not so long ago regarded as old wives' tales or the story of 'a past that never was present,' have become rehabilitated, and in striking instances shown to have a nucleus of truth. 'The voice of tradition,' the late Sir William Ridgeway once said, 'is often thin and piping, but confirmation is rising out of the ground every day.' 'The spade,' in Dr Farnell's words, 'has overthrown the theories of the symbolizer and the sceptic' about Troy, and 'restores reality to the myths' of Crete. Much of the Argonautic saga is no doubt *Helfermärchen*, but Miss Bacon's careful study[1] proves it to be in substance the narrative of a real voyage. Or, to revert to the matter in hand, and to quote the author of the Leukas-Ithaka theory himself, 'for nearly three thousand years the island called Ithaka had passed as the fatherland of Odysseus, as the Ithaka of Homer.' Such a long and consistent tradition is not to be lightly set aside, and the burden is heavy on him who would subvert it.

Then there is the continued elucidation of the Homeric geography,

[1] Janet R. Bacon, *Voyage of the Argonauts*, 1925.

especially by Bérard's monumental work, *Les Phéniciens et l'Odyssée*, which, whatever its faults, had at least the merit of showing that Homer faithfully portrays conditions that were familiar to him. Finally, there are the Hittite records at Boghaz-koi. Only a small number of the ten thousand tablets have so far been read, but already some high authorities believe that they establish the existence of an Achaean polity a century or two before the Troica, an Achaeis which acknowledged the Pelopidae, the ancestors of Agamemnon, as emperors or suzerains. It would seem to have been one of the great powers of the world, and to have been in a position to rank with Egypt and Babylon and other states in international negotiations, and even 'to dare an attack on the Hittite empire.' This would imply a long period, not merely of high civilization—that was already known—but also of strong settled government, and, that granted, we need not reject the prosperity of an island so greatly favoured by nature as Ithaka is, in an age that knew the glories of Knossos and Mycenae. In short, recent discoveries are helping us to a view of the Homeric age and life as real and historical, and have rescued the epics from the Bolshevistics of the Higher Criticism of last century.

The Climate of Prehistoric Britain

by C. E. P. Brooks

AFTER the latest glacial advance of the Quaternary Ice Age, the climate of north-west Europe did not simply recover to its present level, but underwent a series of fluctuations, at times becoming warmer and drier than at present, and again approaching glacial conditions. The pioneer in the investigation of these post-glacial climatic changes was the Norwegian Axel Blytt, who as long ago as 1876 made out a succession of dry and wet periods, which he termed Boreal, Atlantic, sub-Boreal and sub-Atlantic. The existence of these four periods has been abundantly confirmed ; they are best shown in the peat-bogs of Norway and Sweden, where they are represented by layers of tree-stools alternating with beds of peat, but they have now been connected with de Geer's geochronological time-scale derived from the banded glacial clays. It is found that the dry, mainly cool Boreal period extended from about 6500 to 5200 B.C., the moist warm Atlantic period from 5200 to 3000 B.C., the dry warm sub-Boreal from 3000 to 850 B.C., and the wet cool sub-Atlantic from 850 B.C., to about 300 A.D. Thus the Neolithic in north-west Europe falls partly in the Atlantic and partly in the sub-Boreal period ; the Bronze Age entirely in the latter. The early Iron Age, on the other hand, falls mainly in the sub-Atlantic.

A succession of dry and wet periods can be recognized over a wide area in northern and central Europe and again in Scotland and Ireland. The Swiss lake-dwellings are strong evidence of a dry climate during much of the Neolithic, because when they were established the levels of the lakes must have been very much lower than at present, especially if, as seems probable, the dwellings were first built not in the waters of the lakes but on peat-bogs on their Neolithic shores. In Scotland James Geikie obtained a sequence similar to Blytt's, though he stressed the changes of temperature rather than of rainfall. Geikie named his stages Lower Forestian, Lower Turbarian (*i.e.* Lower Peat), Upper Forestian and Upper Turbarian. The Scottish peat mosses

have since been examined more closely by F. J. Lewis[1], who found that the Upper Forest Bed extended over the whole mainland of Scotland almost to Cape Wrath, rising in places to nearly 3000 feet above sea level, or far above the present limit of trees. In the Highlands however it is split into two layers separated by one to three feet of peat, indicating a break in the dry conditions. It is interesting that a similar break in the dry Neolithic climate is shown by the history of the Swiss lake-dwellings. The Upper Forest layer is not found in the Shetlands.

In northern Ireland (where, in 1914, I first became interested in post-glacial climates) two wet periods represented by thick peat layers are clearly separated by a dry period represented by a forest layer, during which later Neolithic man inhabited the surface of the bogs.[2] In 1914 I did not know of Blytt's work and I named the earlier wet period the Maritime Phase, the dry period (corresponding with Geikie's Upper Forestian) the Forest Phase, and the later wet period the Peat Bog Phase. Blytt's nomenclature has priority and should always be employed for these climatic stages.

In England the evidence for post-glacial (*i.e.* post-Wurm) changes of climate is not nearly so strong as in Scotland or Ireland. On Cross Fell in Cumberland the Upper Forest layer is found to a height of 2,550 feet, and it is found again in Lancashire, where also the surface of the bog became firm enough for a corduroy road to be laid across it, but on the eastern side of the Pennines the succession differs, especially in the absence of the Upper Forest layer. A section at Warcock Hill near Marsden described by T. W. Woodhead[3] shows only one forest layer, at the base of the peat and corresponding with the Lower Forest Bed of Scotland. The base of the peat is formed by grey sand containing two epi-Palaeolithic floors. This evidently represents the Boreal period ; Woodhead remarks that the flints from the lower floor are unpatinated while those from the upper floor are patinated, suggesting the oncoming of wetter conditions. Above this sand is the layer of tree remains with Neolithic tools, followed by peat in the lower part of which Neolithic and Bronze Age remains are found. The base of this peat corresponds with the Atlantic period in Sweden, but there is no trace of the sub-Boreal tree layer which is so prominent in Ireland,

[1] 'The plant remains in the Scottish peat mosses'. *Trans. Roy Soc. Edinburgh*, 1905 to 1911.

[2] *Discovery*, 6, 1925, p. 470.

[3] 'The age and composition of the Pennine peat'. *Journ. Botany*, 1924.

Scotland and Scandinavia. As W. H. Pearsall remarks :[4] 'The Neolithic Dolmen period apparently indicated at the base of the Pennine peat lies at the beginning of the Scandinavian sub-Boreal period, and we are apparently faced by the difficulty that the Scandinavian climate was becoming drier and more favourable to woodland vegetation while British climate was becoming colder and moister. The evidence clearly suggests that either the Scandinavian and British culture periods were reached at different times or else that the climatic sequences were actually somewhat different'.

A difference in the sequence of culture periods seems much less probable than a difference in the climatic sequence. At the present time a season of drought in one country is often a rainy season in another, and in fact a dry year in south-eastern England is more often than not a wet year in the western Highlands of Scotland. To enable this to be understood, and to prepare the way for reconstructions of the weather conditions prevailing during the Neolithic and Bronze Ages, it is necessary to make a few remarks about the causes of rain. In these days of broadcasting everyone knows that bad weather—rain and high winds—accompanies cyclones or 'barometric depressions', while fine weather accompanies anticyclones or 'highs'. On the northern side of a depression the wind is easterly, while on the southern side it is westerly or south-westerly. Depressions approach these islands from the Atlantic, and at present most of them pass between the north of the British Isles and Iceland. Hence the prevailing winds over the British Isles are westerly or south-westerly.

Apart from local thunderstorms, there are two main sources of rain, cyclonic and orographic. Cyclonic rain falls during the passage of a barometric depression and is almost independent of the relief of the ground ; orographic rain falls where a moist wind strikes a range of hills or mountains. The prevailing winds over this country being south-westerly, orographic rain falls mainly on the hilly parts of Ireland and western Britain, which for this reason are by far the wettest parts of the country. Rainy seasons in the British Isles fall into two clearly marked types, according to whether they are due to a predominance of cyclonic or of orographic rain. In the first type a series of depressions pass directly across the country and give heavy cyclonic rain in all parts, but since the winds are variable rather than westerly, there is not much orographic rain. Eastern and southern England are

[4] 'The ages of peat deposits'. *Nature*, 114 (1924), p. 829.

abnormally wet, but the north-western parts of the British Isles may be drier than usual. The other type of rainy season occurs when a series of deep depressions pass to the north-westward of Ireland and Scotland. Pressure is very low in the north, over Iceland and Scandinavia, but normal or even higher than usual in southern England. This type of rainy season may be illustrated by the pressure distribution of March to May 1913 (figure 1). During these months strong westerly

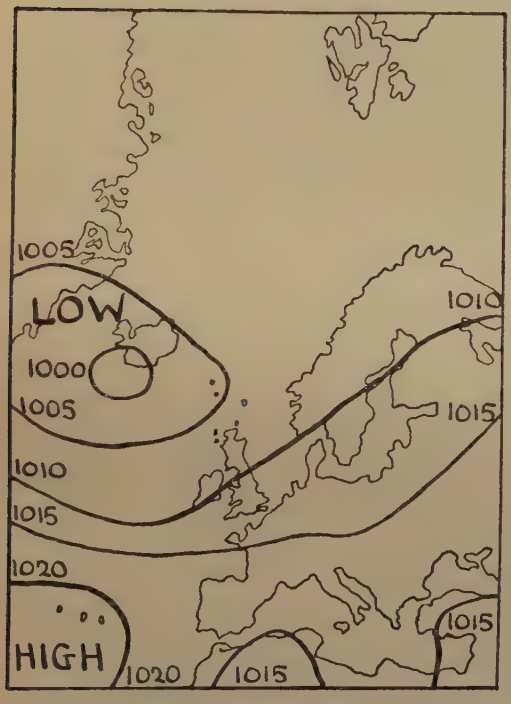


Fig. 1. Pressure Distribution, March–May 1913

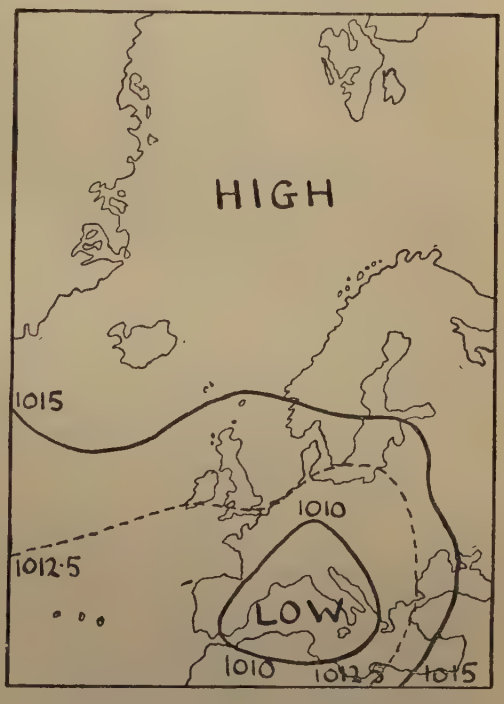


Fig. 2. Pressure Distribution, Jan.–Feb. 1895

and south-westerly winds prevailed ; Ireland, Scotland and the west of England received exceptionally heavy rainfall, exceeding twice the average fall in many parts, but eastern and southern England had an almost average fall for the season.

Similarly droughts fall into two classes. In the first the Azores anticyclone extends unusually far to the north-eastward, so as to include the British Isles in an area of high pressure. The drought of 1921 was of this type ; it was most severe in southern England and in

a belt across central Europe to Russia, but dry conditions extended over most of the Mediterranean area. On the other hand the northern half of Scandinavia experienced rather wet and stormy weather, and even the north-west of Scotland lay outside the anticyclone and had persistent south-westerly winds and a wetter summer than usual because of the orographic rainfall.

The second type of drought in the British Isles, much less frequent than the first, is caused by an anticyclone to the northward of these islands. An example occurred in the early months of 1895, and figure 2 represents the pressure distribution during January and February of that year. The majority of the depressions passed to the south of Ireland and England, and over the British Isles the prevailing winds were easterly. This drought was most severely felt over the western Highlands which normally receive a heavy orographic rainfall, while eastern and southern England and the eastern slopes of hill-ranges like the Pennines received almost their usual fall.

The Atlantic period was a time of rapid peat formation in northern and north-western Ireland, western Scotland, Lancashire, Scandinavia and north-west Germany, pointing to heavy rainfall over these regions, while eastern and southern England do not appear to have been wetter than at present, and may have been drier, so that in the British Isles this wet period was of the orographic type. Another scrap of evidence pointing to the same conclusion is the direction of fall of trees in the Boreal submerged forests of Lancashire and South Wales. J. Fairgrieve[5] noted that of 29 trees of which the direction of fall could be determined, 18 fell towards east or north-east, pointing to west or south-west winds. We may therefore take figure 1 as a fair representation of the pressure distribution during Atlantic times, and the weather in the British Isles associated with this type of pressure distribution as the usual weather of Atlantic or early Neolithic times. The Monthly Weather Report describes March 1913 as 'rough and wet', with 'an entire absence of the keen dry winds associated with the season'. April was 'dull and wet' and May was 'very variable'. Even more noticeable than the heavy rainfall was the abnormally large number of days on which rain fell in the west, often more than 25 in each month. The rain was of the steady soaking type, recurring for many hours day after day.

[5] 'Evidence of prevalent wind directions in the distant past'. *Q.J.R. Meteor. Soc.* 50 (1924), p. 159.

In sub-Boreal times both the amount and the distribution of the rain were very different. The small rainfall in the west is clearly shown by the presence of tree stools submerged in the waters of small Irish loughs. There are several such occurrences in Donegal, most of which can only be accounted for by supposing that when the trees grew the lough basins were dry, and that the evaporation from a free water surface exceeded the rainfall. Evaporation from a free water surface increases as the rainfall diminishes, and in Camden Square, London, the two meet at about 18 inches a year ; western Ireland is more open, and under similar weather conditions the evaporation would be greater, but the rainfall cannot have exceeded 25 inches a year. At present the average fall is about 50 inches. Another example is Lough Arrow in Connaught, where the rainfall is now about 40 inches a year.

A second striking feature of the sub-Boreal climate was the absence of strong westerly winds. At present these winds are quite as inimical as the heavy rainfall to the growth of trees on the western coasts of Ireland, Scotland and Norway. During the sub-Boreal however trees grew freely ; stumps can be seen in very exposed situations in north-west Ireland, and the islands off north-west Norway, now quite bare, were forested to the water's edge. This absence of strong westerly winds shows that the dry conditions were analogous to the second type of drought, due to high pressure over Scandinavia and to westwards. Under these conditions the prevailing winds over the British Isles would be easterly or north-easterly ; the tracks of depressions would lie mainly along the Channel or across the Bay of Biscay, and the rainfall would be heaviest over southern England and the eastern slopes of the English hills.

The type of pressure distribution shown in figure 2 satisfies the conditions of the sub-Boreal period as regards rainfall, but not as regards temperature. Under such conditions the summers would be warm, but the winters would be intensely cold, and in fact February 1895 is renowned for its skating. But there is strong botanical evidence that the sub-Boreal winters in Sweden were no colder than the present winters, while the Irish peat-bogs could not have been frozen in winter, or they would have been uninhabitable when the spring thaw came. The sub-Boreal seems to have been generally warmer than at present, and the amelioration seems to have increased northward. Calculations show[6] that a sustained increase of about 5° Fahr. in the winter

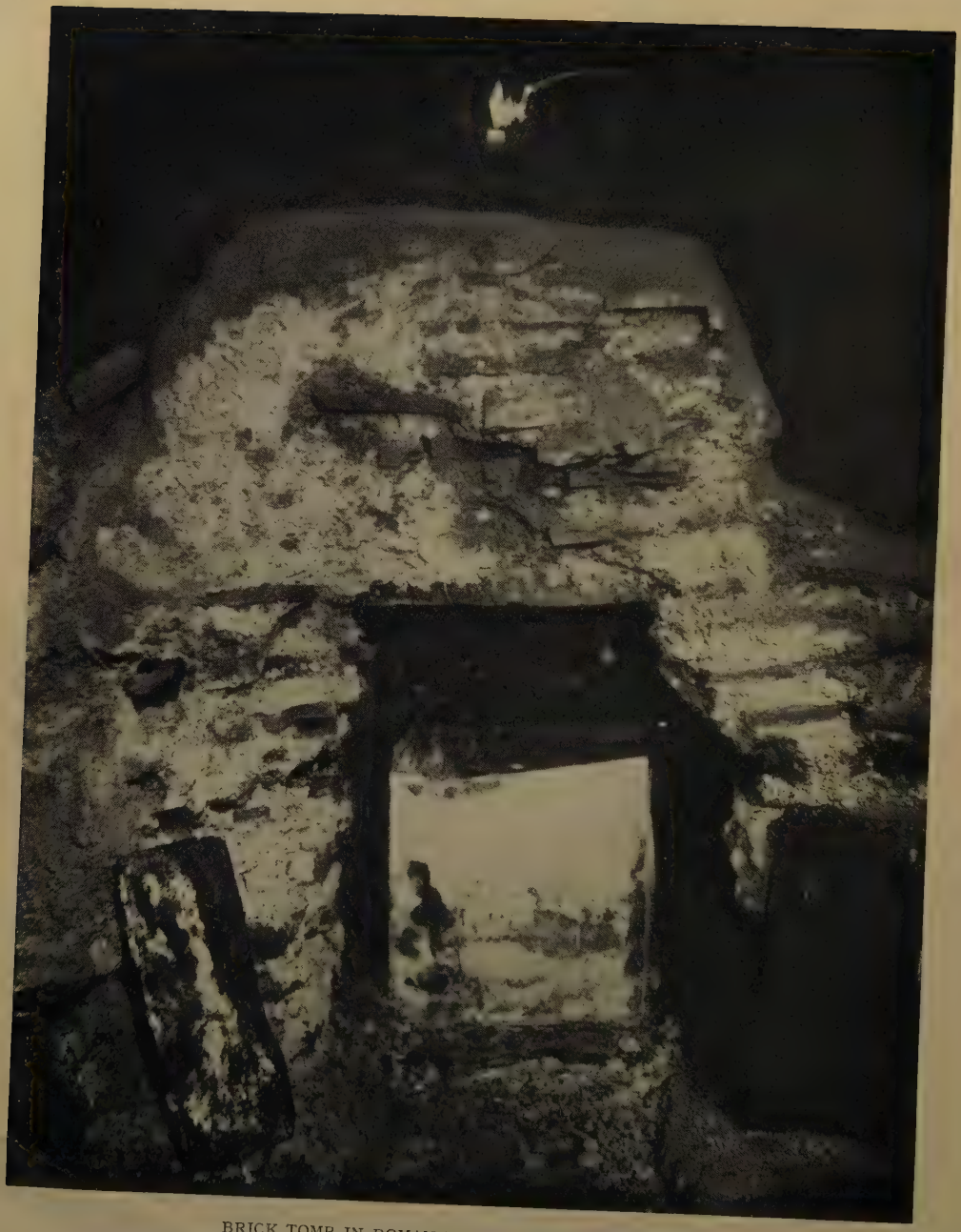
[6] C. E. P. Brooks, *Climate through the ages*, 1926, ch. 1.

temperature over the Arctic would suffice to clear away the Arctic ice, and there is reason to believe that this actually happened during the sub-Boreal period. This would at once bring much warmer winters to northern and central Europe, and rob our east and north-east winds of most of their terrors.

The distribution of pressure and winds which has been inferred for the sub-Boreal period differs considerably from that for the Forest phase which I constructed in 1921[7]. This difference is due partly to a fuller knowledge of the distribution of the Upper Forest layer and partly to recent investigations into the causes of droughts and rainy periods. The introduction of the method of pollen spectra for the investigation of peat bogs offers the hope that it will ultimately be possible to map out with accuracy the areas over which peat was forming at different times and so obtain very detailed knowledge of the variations of post-glacial climate.

[7] 'The evolution of climate in north-west Europe'. *Q. J. R. Meteor. Soc.* 47 (1921), p. 183.

PLATE I



BRICK TOMB IN ROMAN BARROW, MERSEA ISLAND
From negative lent by S. Hazzledine Warren.

facing p. 419

Barrows

by O. G. S. Crawford

THE fascination of Archaeology consists in reconstructing the life of the past, but by a curious paradox we obtain most of our raw material from the graves of the dead. We profit by the superstition which ordained that the dead man should be supplied with tools and weapons, and the dead woman with ornaments, to accompany them to the land of shadows. We profit also by the conservative instinct which regulated the construction of the tomb and the accompanying ritual. Nothing changes so slowly as burial-customs, even in these radical times. In all essentials the modern funeral procession remains Victorian in its gloomy respectability, its tawdry finery, and its obsolete methods of transport.

The origin of barrow-making being unknown, one is free to speculate without the risk of being upset by evidence. The earliest

Fig.1—SECTION OF BURIAL-CAVE AT GOP, FLINTSHIRE
(After Sir William Boyd Dawkins in *Arch. Journ.* 1901, LVIII, 327)

deliberate burials occurred in the Mousterian period, in caves ; and although connecting links are not numerous, one cannot help feeling that the natural cave must have been the ancestor of the megalithic passage-grave. In all essentials the cave and the passage-grave are the same ; the ' points,' so to speak, of a habitation cave are (1) the ground in front of the mouth, (2) the mouth, and (3) the dark, little used interior. Of these the mouth was the most important, and was often walled off ; and it is natural to suppose that the darker recesses were used for sleeping in at night. These three features correspond fairly well with the typical arrangement of a passage-grave ; and if the houses of the dead were modelled upon those of the living, as is usually supposed, there may be some truth in this suggested evolution ; but there are many difficulties. However this may be, megalithic burial-places were very often—and always in our country—covered with mounds of earth or, in stony country, cairns of stone : they were in fact the first barrows ; so we must consider them. The subject is a very thorny one, and in order to avoid being drawn into argument, I shall avoid problems and keep to a description of facts. The title of this paper suggests that geographical and ethnographical deductions may for once be given second place.

There are two types of megalithic barrow—round and long. In some regions both occur side by side, and it is supposed that they represent the circular and rectangular type of hut respectively. The three classic examples of megalithic round barrows are Gavr Inis, Brittany; New Grange, Ireland (fig. 2); and Maes Howe in Orkney. The newly-discovered mound of Houge Bie in Jersey belongs to the same class. In essential plan these are all identical—a huge mound covering a long flagged passage, leading to a central, or nearly central cruciform chamber ; the whole mound being sometimes surrounded by a circle of stones or a ditch. There are no examples of this type in England except, possibly in a degenerate form, in Cornwall and (more doubtfully) in Derbyshire. It was supposed by Sir Flinders Petrie that Silbury Hill, near Avebury, was of this type. That huge barrow, 130 feet high, might well be a Wessex ' New Grange,' but for the fatal objection that no megalithic burial-mounds of the round type occur in Wessex ; whereas in Spain, Brittany, Ireland and Orkney, in the neighbourhood of the classic examples alluded to, smaller round mounds are abundant. The Professor however, was optimistic, and boldly put his theory to the test of excavation. He dug a hole in Silbury above the spot, south-east of the centre, where, by a just

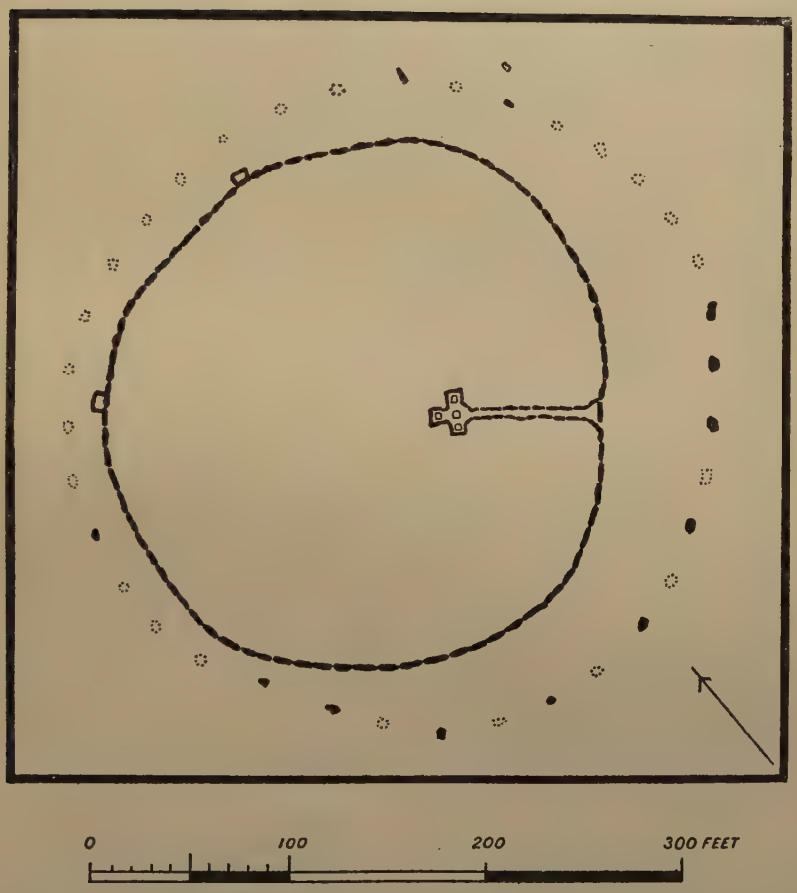


FIG. 2—PLAN OF CHAMBERED ROUND BARROW AT NEW GRANGE, NEAR DROGHEDA, IRELAND
(After G. Coffey in 'New Grange,' Dublin 1912, p. 3)

analogy, and from observing a slight sinking on the slope, he expected to find the burial-chamber. But alas ! there was no chamber and the theory had to be abandoned.

The long type is called a Long Barrow or Long Cairn. Its varieties are protean. It may be a simple mound of earth, as in Wessex, or a cairn covering stone burial-chambers, as in Oxfordshire and the Cotswolds. It has different names in foreign lands ; but the navetas of Minorca, the Giants' Tombs of Sardinia, and the long, rock-cut tombs so common in Mediterranean lands are all varieties of the same species. Like the round ones these long tombs were intended for collective burial. We may be sure that elaborate rites were enacted at funerals in those far-off days, when the Cult of the Dead monopolized all religious interest. At Belas Knap, a long barrow near Cheltenham, there is a strong hint of human sacrifice ; and the remains of purificatory fires were found within the cairn. Tribute was paid to Weland, the Invisible Smith of the Berkshire Downs, nearly two thousand years after the burial-place was built ; and the custom of leaving twopence there for a horse to be shod survived down to within living memory.

Long Barrows are of earth and stone. Those of earth probably had wooden chambers. The classic example is Worbarrow, which was excavated in 1893 by General Pitt Rivers ; remains of wooden posts were found inside the barrow. The substitution of earth and wood was due to the absence of suitable stone for building chambers. Wherever such stone was present it was used. In some cases it was even transported several miles. In the celebrated West Kennet long barrow near Avebury, the chambers are of sarsens or grey wethers, but the interstices between them were filled up by flat oolitic slates brought there from near Calne—that is the nearest outcrop, at any rate,—seven miles away, and oolitic chips can be picked up on the surface of an unexcavated long barrow on Horton Down, two miles to the south-west. Wiltshire is the classic region of earthen long barrows ; there are about a hundred in the county altogether ; Dorset has about forty, Hampshire about twenty, Berkshire one. Elsewhere they are more rare, but there are some in Yorkshire and three at least in Lincolnshire. However, I am not going to deal with their distribution, for it would lead me on to the causes of that distribution ; and that would suggest a discussion of the relative attractions to neolithic man of a good water-supply and open pasturage, on the one hand, and pearls, amber, jet, copper, flint and rouge, on the other—commodities which (with

the exception of flint) are entirely absent from the principal long barrow regions.

Three types of chambered long barrows may be distinguished. At first the entrance was made in the east end, and through a portal consisting of two upright stones and a lintel. Through this one went along a narrow passage between uprights, and on either side of the passage were the burial chambers. The whole was covered in by a mound of earth and stones. To this type belong Wayland's Smithy in Berks (fig. 3), several of the Somerset long barrows, and in Gloucestershire Hetty Pegler's Tump at Uley and the Nympsfield barrow close by.

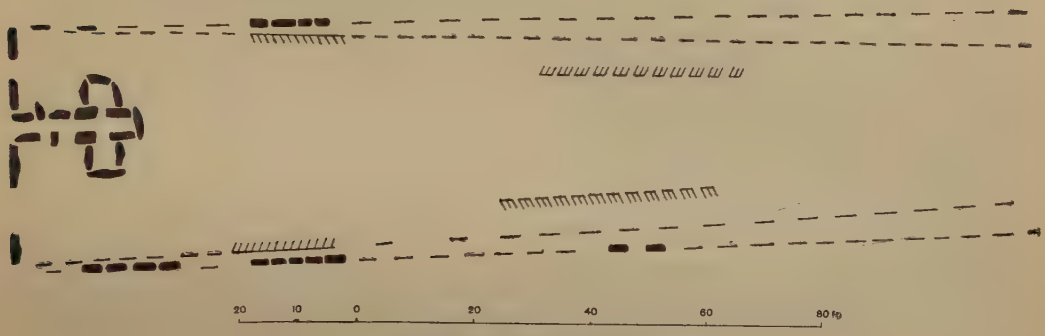


FIG. 3—WAYLAND'S SMITHY
Surveyed by Rev. Charles Overy. 1 : 400

Later it was found more convenient to enter the burial chambers by a passage opening in the side of the barrow; but a dummy portal was still placed at the east end, leading nowhere. Most of the Cotswold long barrows are of this later 'false passage-grave' type exemplified in fig. 4. Finally, as in the St. Nicholas long barrow, the side chambers degenerated into mere cists without entrances. The long barrows of Brecknockshire belong, for the most part, to this late stage.

It is generally agreed that the makers of long barrows belonged to the Mediterranean race. The evidence of long barrow skulls is quite consistent. This burial-custom continued until the invasion of the beaker-folk, but one must not imagine that the Mediterranean natives suddenly stopped making long barrows the moment the first boat-load of beaker-folk landed. What probably happened was that the beaker-folk conquered them and 'overlorded' them for their own good in the approved Nordic fashion. The makers of Avebury lived on Windmill Hill, in a fortress that can be paralleled only—outside Britain—in

Germany, especially in that part of Germany from which we know that the beaker-folk came.

The beaker-folk were round-headed and buried their dead in round barrows. In every way they were the exact antithesis of the long barrow people, from whom they differed as much as a German from a Sicilian. Naturally the two races did not get on very well together. Indeed there is evidence of disagreement coming from that stronghold of the long barrow people—the Cotswolds. There is little reason to suppose the beaker-folk ever penetrated into that region, or returned alive if they did. One of them certainly did not; for his brachycephalic skeleton was found under the lintel of Belas Knap. That is also good evidence that long barrows continued to be made after the beaker-folk had arrived.

It was indeed very good for the Mediterraneans to be conquered by the beaker-folk. Not only did this conquest purge them of that senseless cult of the dead on which they wasted their energies—a kind of megalithomania—but it released them from the tyranny of stone in another way, by introducing the knowledge of metal. What happened when this healthy Nordic purge was not administered may be seen in Brittany,

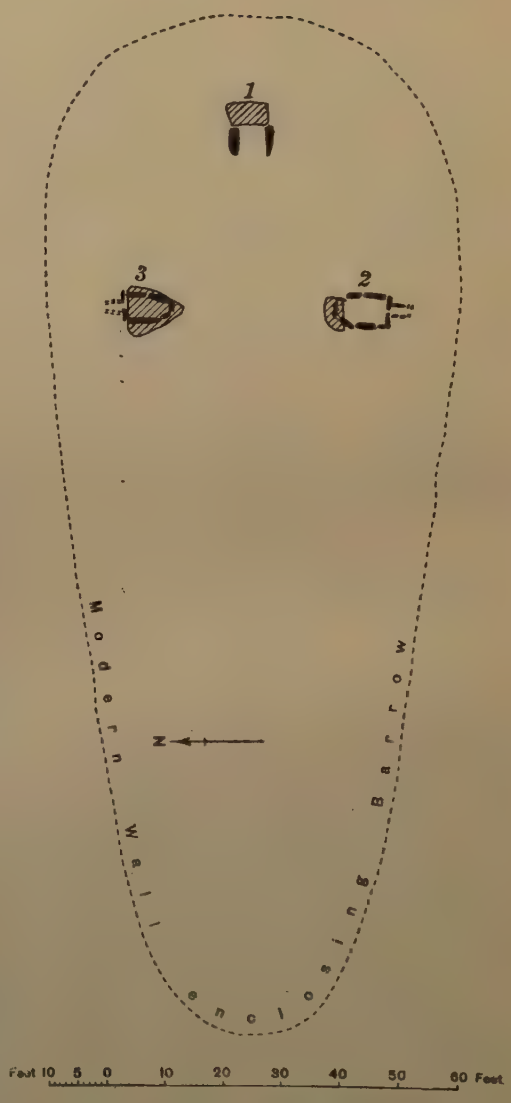


FIG. 4—WINDMILL TUMP, RODMARTON
(After Thurnàm, 'Crania Britannica', II, 1865). 1:400

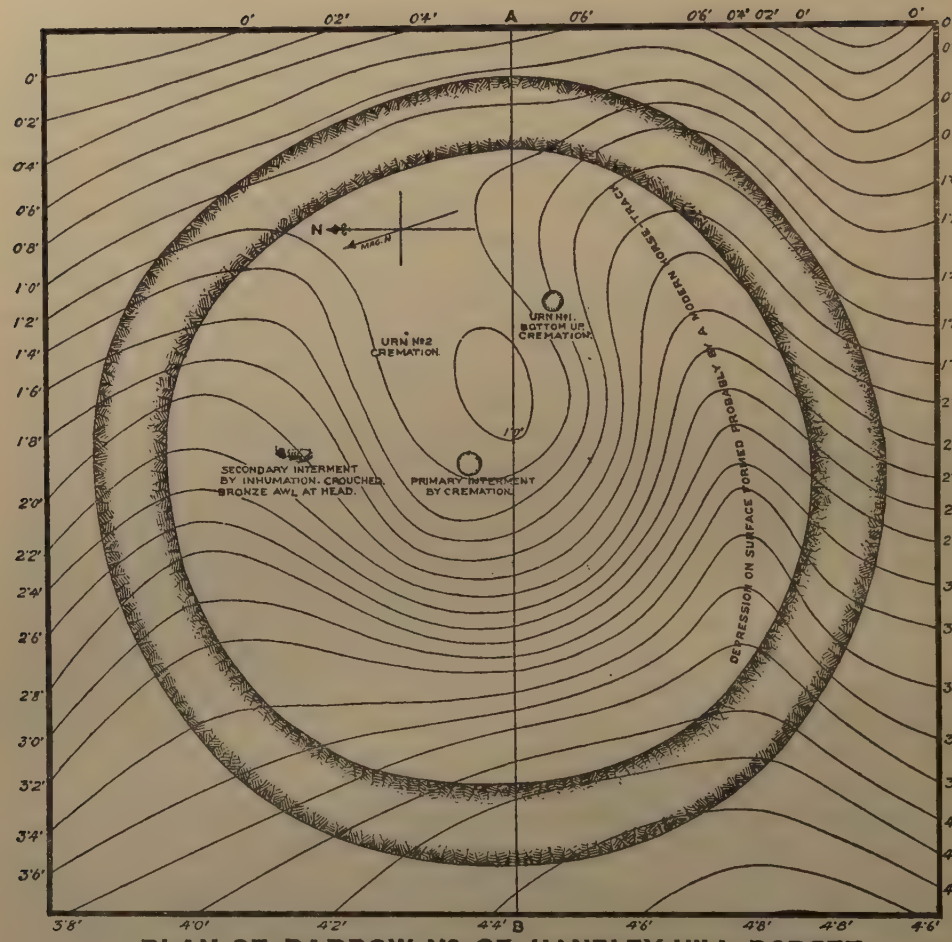
where progress was petrified by the gloomy preoccupations of tomb-building.

The beaker-folk specialized in round barrows, of which there are many kinds. One form is the Bell Barrow. It consists of a large mound with a ditch round it. Between the foot of the mound and the ditch there is left a narrow shelf or berm of natural ground, and round the outside of the ditch a small bank is cast up. The whole has the appearance of a bell—hence the name, invented by Colt Hoare.

It is certain that all bell barrows belong to the early part of the Bronze Age. They are very common in Wiltshire, and some of them have yielded rich burial goods of gold and bronze. The method of procedure was as follows :—a pit, roughly circular, was first dug in the chalk ; the corpse was then placed in it with the grave-goods. A mound of earth was piled on the top, and last of all, a shallow ditch was dug round and the contents thrown up over the skirt of the mound. It is probable that the digging of the ditch was a ritual performance, for in the case of certain barrows (which on archaeological grounds seem to belong to an earlier date) the ditch was much deeper and very irregularly dug. It seems thus to have originally served a practical purpose—that of a quarry for obtaining the material of the mound. The material of which earthen long barrows were made was certainly derived from the side-ditches which flank it.

This question of the method of construction is rather an important one, but it has been little studied. What led to the abandonment of the earlier practice ? One can understand the survival of a shallow ritual-ditch, but it is less easy to see why any change at all should have taken place. In a late bell barrow at Roundwood in Hampshire, I found that the material of the mound consisted entirely of scraped-up soil, dark in colour, and just such as would be obtained from the surface of a ploughed field. If during the long barrow period there were few cultivated fields, and if later they became very common, it might be found easier to obtain the material by scraping up soil than by laboriously quarrying the hard chalk. It must be said however, that so far as superficial observation goes, a great many round barrows seem to be made entirely of quarried chalk.

The ritual-ditch reached its highest development in the disc barrow, which consists of a ditch, nearly always perfectly circular, with a bank generally on its outer side, surrounding a platform of bare level ground. In the centre is a small, low mound of earth, covering (in every recorded instance) an interment of burnt bones. In no



PLAN OF BARROW Nº 23, HANDLEY HILL, DORSET.
EXCAVATED IN AUGUST 1893.

FIG. 5—TYPICAL EXAMPLE OF BARROW WITH *REGULAR* (RITUAL?) DITCH
(Reproduced by permission of Captain Pitt Rivers, from ' Excavations in Cranborne Chase ', IV, 1898, plate 295)

PLAN OF BARROW 27,
104 YDS. TO THE NORTH OF WOR BARROW, ON HANDLEY DOWN.
SPECIMEN OF A ROUND BARROW PROBABLY OF THE BRONZE AGE,
WITH AN IRREGULAR DITCH.
EXCAVATED BY GENERAL PITT-RIVERS IN 1884.
SECONDARY INTERMENT ROM. BRIT. EXTENDED, WITH COFFIN-NAILS
PIT DUG FOR SOIL FOR THE BARROW. RED-DEER ANTLERS FOUND. DEPTH 4·7 FT.
TERRA-COTTA SPINDLE-WHORL.
THE CONTOURS OF 0·2 FT. VERTICAL HEIGHT, SHOW THE FORMATION OF THE GROUND BEFORE EXCAVATION.
SCALE OF FEET

BARROW IN CRANBORNE CHASE, DORSET, WITH *IRREGULAR* DITCH

Reproduced by permission of Captain Pitt Rivers, from ' Excavations in Cranborne Chase', iv, 1898, plate 293

facing p. 426

instance has a primary inhumation been found in a disc barrow. The diameter of disc barrows varies, but normally it is about 150 feet. There are two types of disc barrows, but since they seem both to be more or less contemporary, it is hardly necessary to describe the less common type; and indeed no attempt has ever been made to distinguish them chronologically. Sometimes, in the commonest type of disc barrow, there is more than one central mound.

The age of disc barrows is proved by the discovery in them of remains belonging exclusively to the early part of the Bronze Age. They are thus roughly contemporary with bell barrows; but in bell barrows there have been found both beakers and copper knives. These objects are characteristic of the very earliest phase, and as they have never been found in a disc barrow, it is reasonable to infer that disc barrows did not come into fashion until later. The fact too, that the burials in them are invariably cremated points in the same direction.

But we have even better evidence. In twenty-five cases there have been found associated with early Bronze Age burials certain ribbed beads of glass or faience. The age and provenance of these beads is disputed. Sir Flinders Petrie, Professor Sayce, and Dr Hall regarded them as Egyptian, but Sir Arthur Evans has suggested that they may have come from Crete. Opinions differ also with regard to their age. The dates mentioned by Sir Arthur Evans however all fall between 1600 and 1100 B.C., and this covers the dates suggested by others. I hope it may be possible before long to arrive at some more precise estimate, but meanwhile 1400 to 1200 B.C. would appear to be a central date, and one in agreement with the opinions of Egyptologists. The matter is of prime importance for British prehistoric chronology; and since out of the twenty-five separate instances where the beads have been found, no less than five were in disc barrows, it may be concluded firstly, that all normal disc barrows are contemporary, and secondly that their date falls round about 1400–1200 B.C.

The beads in question are sometimes referred to as the 'Stonehenge beads'. But this is due to a misconception. The only reason for associating them with Stonehenge is that they have been found in two separate barrows near Stonehenge. That, of course, proves nothing. It is quite usual to find regimental buttons and empty cartridge cases in the same barrows, but this does not prove that Stonehenge was built by the British army.

The burials in disc barrows are supposed, from the nature of the grave-goods—the supposition is not necessarily correct—to have been

the burial-places of women. We may, if we like, associate this fact with the known matriarchy of the Picts. It is certainly a fact that the disc barrow is an elaborate kind of burial-place, and one likely to have been used only for important people.

Contemporary with disc barrows are twin barrows, which consist of two mounds with but a single ditch. It has been suggested that these are the burial-places of a man and his wife. There is no evidence to disprove this and it seems not unlikely. Sometimes, however, *three* mounds are included within the ditch. Triple barrows are less common—I can only think of two instances—and do not necessarily disprove the husband and wife hypothesis.

So far I have been dealing mainly with Wessex. What kinds of burial-places were being made elsewhere? In stony countries, instead of digging a pit, they made a cist of four slabs of stone; and instead of a ditch they surrounded the mound with a ring of upright stones. Sometimes the ring of stones was there without the mound. That stone circles were invariably burial-places would be hard to prove: exhaustive excavation of all or nearly all such circles could alone achieve it. But in all cases where such excavation has been undertaken, some remains of a burial have been found in the centre; and one may conclude that, even if they served some additional object, their primary purpose was sepulchral.

It is tempting to suppose that as, in countries where stone is available, it was used for the tomb itself and the surrounding enclosure, so the disc barrow was merely an attempt to reproduce the stone circle in a stoneless country. A burial-pit is certainly a substitute—the only possible one—for a stone cist; for we find even in Wiltshire that, in the regions where sarsen stones occur, stone cists were actually made. That is the case near Avebury, where several sarsen-cists have been found, some of them containing beakers. Moreover the usual ring of stones surrounds the barrow too. It must be remembered that stony countries are the rule, and stoneless ones, like most of Wessex, the exception, in western Europe: and that England was almost the first stoneless country that the beaker-people had met with in their wanderings. In those parts of England where stone occurs they would follow their usual practice; and in others they would conform as closely to it as the altered conditions permitted.

Of the burial customs that obtained here between about 1200 and about 600 B.C. we know very little. Probably many cremation barrows belong to this period. Towards the close of the period, if

not before, began those invasions of Continental tribes bringing with them, like their ' beaker ' predecessors, the knowledge of a new metal—iron. (It may be remarked in passing that every invasion of Britain has brought with it some benefit to counterbalance the misery and destruction consequent upon it). We can detect at least four different varieties of pottery which may be associated with the different tribes who took part in this invasion ; though it must not be imagined that

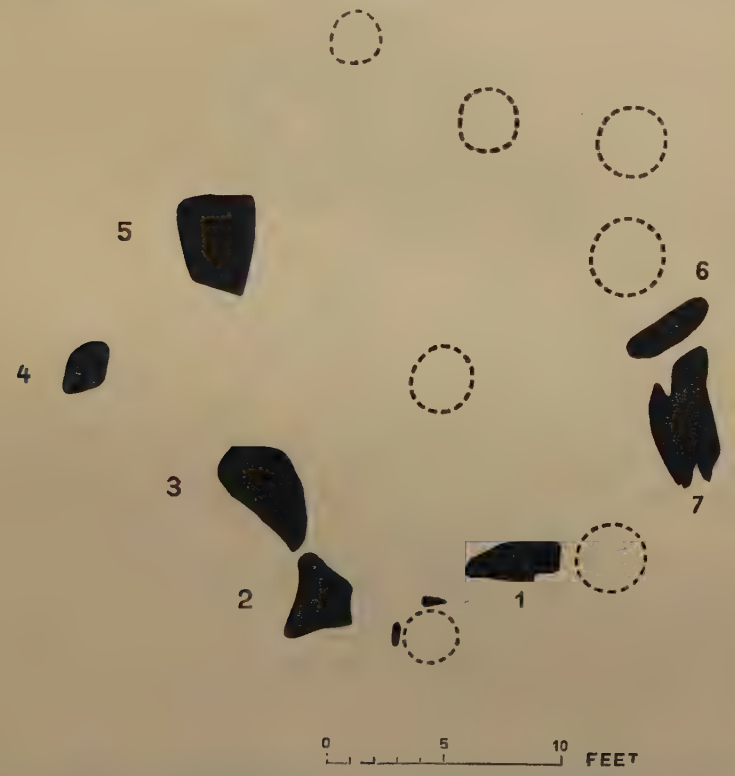


Fig. 6—RING OF STONES (SARSENS) CALLED THE PENNINGS CIRCLE, AVEBURY
The Dotted Circles are depressions where Stones may have once stood
(Reproduced by permission of The Wiltshire Archaeological Society, from a plan by the author, in W.A.M. xlii, 1924, opp. p. 55)

all of these are necessarily contemporary. Barrows were not invariably thrown up over the cremations ; it was a common practice to dig a hole in an existing barrow, and put the cinerary urn with the bones in it. Several barrows, made at an earlier date perhaps, have been found thus ' potted.' The most famous is the first one found—the Deverel barrow near Bere Regis in Dorset. Another was found by Dr Clay in

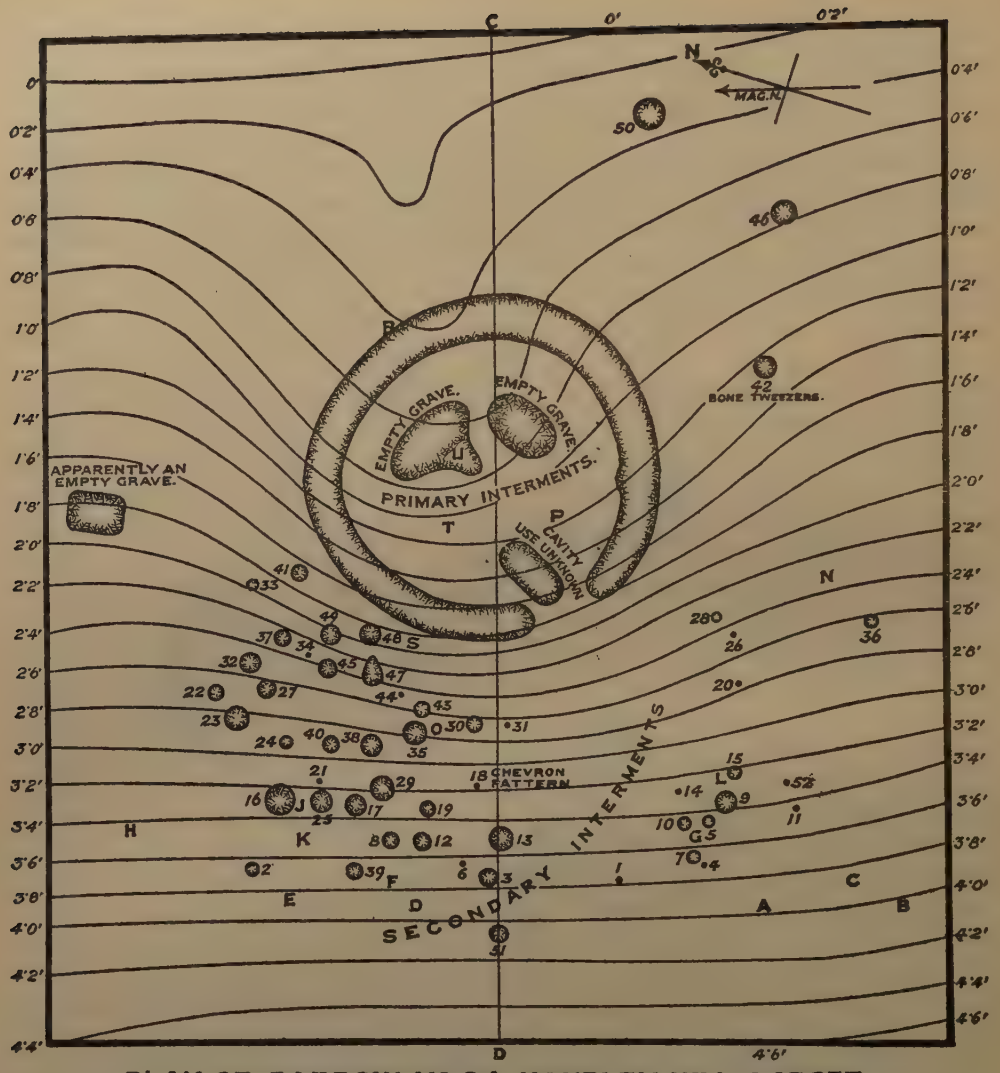


FIG. 7—SMALL URN-FIELD ON HANDLEY DOWN, DORSET
(Reproduced by permission of Captain Pitt Rivers, from ' Excavations in Cranborne Chase ', IV, 1898, plate 295)

1925 on Woodminton Down in south Wilts ; it contained 28 burials in urns, all more or less fragmentary, only 8 being capable of complete restoration.

Urn-fields were an alternative method of disposing of the dead. Sometimes they were near barrows—General Pitt Rivers found a small one on Handley Hill, Dorset, near his Barrow 24. It consisted of 52 pits, each containing burnt bones, and in 47 cases there was an urn as well. The pottery used for this purpose, here and elsewhere, is generally of the finger-tip type, which is coarse and contains a large admixture of pounded flint grit. It is very friable and is the despair of pot-menders. Urn-fields also occur in the Lower Thames basin ; the urns from one at Ashford in Middlesex are in the British Museum.

The finger-tip people invaded Yorkshire, for their pottery has recently been found at Scarborough on the site where later the Romans built a signal station. A still later wave of invaders built barrows—the only Iron Age barrows known in this country. They are called the Danes' Graves and some are still to be seen in a small copse near Driffield in the East Riding. They were excavated by Canon Greenwell, who found in them remains characteristic of the first La Tène period (500–300 B.C.) The barrows are quite small and are placed close together.

The later Iron Age people, whom Caesar found here, buried in urn-fields, the most celebrated being those at Aylesford and Swarling in Kent. It is possible that mounds covered these interments and were ploughed away, but there is no evidence either way.

The Romans occasionally buried in barrows, particularly in the east of England. Roman barrows are peculiar on account of their steep, conical outline. Six—called the Six Hills—occur at Stevenage in Hertfordshire, and there is another at Youngbury in the same county. The Bartlow Hills in Essex are similar, and yielded beautiful enamelled casquets and other objects. There is another on Mersea Island, Essex. Sometimes these barrows contain a brick chamber, and the burnt remains are generally in a beautiful jar of green glass. A fine Roman interment, once possibly covered by a barrow, was found not long ago at Radnage, near Bledisloe in the Chilterns. The contents are in the British Museum and are therefore not likely to be destroyed by fire as were those found in the Bartlow Hills.

There is a class of mound that is sometimes called a barrow, but which seldom, if ever, yields an interment. It consists of a low, flat, rectangular mound rather like a pillow ; there is often a longitudinal

crease down the middle, and sometimes grooves or creases at right angles to and on either side of the central one. These mounds often occur near and within hill-top camps, but they may be of more recent date. One of the best groups is that on Steeple Langford Cowdown, near Yarnbury in Wiltshire. No satisfactory explanation of the purpose of these mounds has ever been put forward. It has been suggested that they are artificial rabbit warrens, but I have never seen a rabbit using one, and such temptations to burrow seem rather superfluous. One such in Hollybush Camp on the Malvern Hills has been twice excavated without providing a solution of the problem.

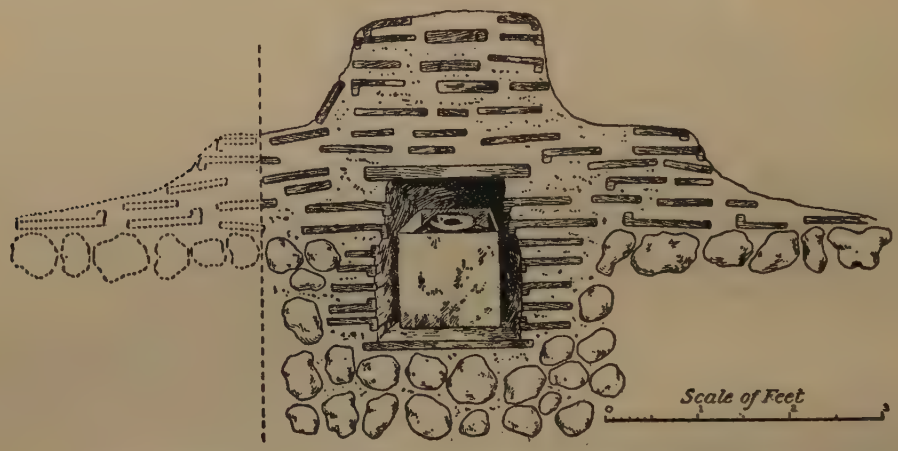


FIG. 8—SECTION OF TOMB IN ROMAN BARROW ON MERSEA ISLAND, ESSEX
(After S. Hazzledine Warren in Trans. Essex Arch. Soc. XIII, 1913, p. 129, by kind permission)

The Saxons certainly made barrows, and the best example near Oxford is the Asthall barrow, recently excavated by Mr Thurlow Leeds. It is a very big mound and the interment was by cremation, so that the valuable grave-goods were much damaged. No doubt such burial was reserved for important people, then as in earlier times, for the usual method of burial during the period was either in flat cemeteries, or as secondary interments in prehistoric barrows. It is quite common to find these secondary interments in all the prehistoric barrows described; they are generally at no great depth in the body of the mound. Such remains have been found in Wiltshire in disc barrows as well as in more bulky mounds, and in that county they are much more common than flat cemeteries. In the Cotswolds secondary interments of the Anglo-Saxon period have been found in the long barrows at Swell, Crawley and Lyneham.

On the Berkshire downs is a gigantic mound called now Scutchamer Knob, which is the modern form of *Cwichelmes hlew*. It is two miles from West Ilsley, but is best approached from West Hendred and Ginge on the north. This mound is mentioned in the Anglo-Saxon Chronicle under the year 1086, where it is said that the Danes went along Ashdown, that is to say, along the Ridgeway, to Cwichelmeshlew. Professor Stenton thinks it highly probable that it was the burial-mound of King Cwichelm the first of Wessex.[1] I do not know whether any attempt has been made to excavate this barrow systematically. A large amount of it has been removed—there is a gaping hole on the north side; but it does not follow that this is the result of archaeologists' work—the chalk is more likely to have been removed by farmers. If so, and if the floor of the barrow has not been reached, it would be worth exploring, and the removal of so much of the mound already would make this less difficult than usual. A similar mound may have existed at Challow near Wantage—the hill of Ceawa, according to Professor Stenton.

A celebrated find of gold jewellery was made in a barrow in Taplow churchyard. I do not know whether this barrow was proved to be of Anglo-Saxon construction, but it is probable that it was, for, as has recently been pointed out,[2] the name of Taplow originally signified the Hill of Taepa; and by analogy we may conclude that by his 'hill' was meant his barrow. (The difference in connotation between *beorh*, barrow, and *hlaew*, hill, is unknown, but I am inclined to think that *hlaew* generally meant a *big* hill, both natural and artificial).

In Kent are a number of Saxon barrows. Like the Danes' Graves, they occur in large numbers, set close together, and are small. There is a group in Greenwich park, and another on Barham Downs. Both groups have been excavated and found to contain burials of the pre-Christian period (600–450 B.C.) I strongly suspect that mounds would have been visible over the graves in some of the other so-called 'flat' cemeteries, did not these nearly always occur on ploughed land. The mounds are so small that they would rapidly disappear by ploughing; and it must be remembered that, the site of the Saxon settlement being generally the same as that of the medieval and modern village, the

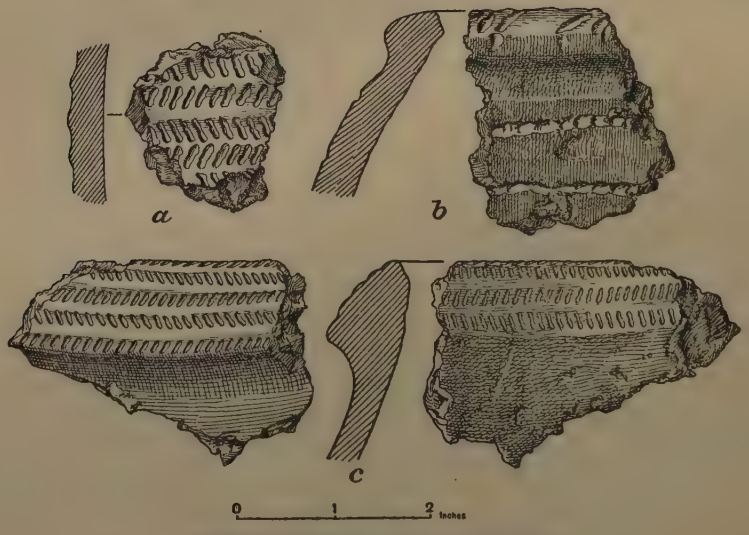
[1] Place-names of Berkshire, 1911, p. 31.

[2] Buckinghamshire Place-names (English Place-name Society, vol. II, Cambridge, 1925), p. xiv.

site of the earlier cemetery was nearly always included within the common fields of the township.

Castle Mounds are often mistaken for barrows, and it is often very difficult to tell them apart. A castle mound usually has a courtyard or bailey attached to it, the pair resembling a loaf of bread in plan. In one instance, in Wales, a mound served both purposes. It was undoubtedly used as a castle mound, but it contained in its centre a stone cist with a prehistoric burial. The tops of castle mounds were fortified by a wooden keep or castle, or by a stone wall, whose hard foundations may sometimes be detected round the rim. The centre is sometimes hollow, and there is generally a deep, wide moat, with a causeway for the entrance. If the mound is a barrow, the surrounding ditch is not, as a rule, so big.

Barrow-burials may be said to be extinct in this country, unless the churchyard gravemound can be included within the term. The last recorded instance was the secondary interment of a horse in a bell barrow on Farley Mount in 1731! But the subject of animal-burial opens up a wide, untrodden field of inquiry, and must therefore be postponed to another occasion.



POTSHERDS FROM BURIAL-CAVE AT GOP
(By permission of Sir William Boyd Dawkins)

THE 'BARBERINI IVORY' IN THE LOUVRE

facing p. 435

The Theory of Historical Cycles

Note on the Illustrations

Hegeso (plate II) is a lady sitting in a chair; her bodily act of sitting, her physical gestures, are the artist's subject. The emperor (plate I) of the Ivory is seen by the artist not as a gentleman sitting on a horse, for his bodily action is not emphasized; but as the Emperor, the centre, in a spiritual sense, of his world. The subject of the composition is not actual gestures, but the thought which these gestures symbolize. Similarly the Greek vase-painter (plate III) is drawing a physical body, flying through material air; the sculptor of Bellicia (page 438) is depicting, as best he can, the ecstasy of a soul.

The Theory of Historical Cycles

II. CYCLES AND PROGRESS

by R. G. Collingwood

WHEN Huckleberry Finn's religious education was taken in hand by the Widow and Miss Watson, his impressionable mind was at first strongly affected—in his own words, he was all in a sweat—on hearing the story of Moses. Later, his interest in Moses cooled off, because Miss Watson let out that Moses had been dead a considerable time, and Huckleberry Finn, as he explains, took no stock in dead men.

It was a very naïve reaction to history ; but naïve reactions often reveal truths which are blurred by a more sophisticated attitude, and must somehow be recaptured before we can see things as they are. Huckleberry Finn may here stand as the babe or suckling out of whose mouth the historian is to learn wisdom.

Moses is dead, and there is no need to get in a sweat about him. It is nobody's business to give him advice, or to advance or frustrate his schemes ; nobody is called upon to work for him or against him, to excite himself about choosing to be pro-Moses or anti-Moses, to allow his feelings to be inflamed with partisanship or opposition, or even to commend or regret, applaud or condemn, label as good or bad. There is no sense in using terms like good and bad except of persons or things, that come into practical relations with one's own will. When Margaret Fuller announced that she 'accepted the universe', Carlyle remarked, 'Gad, she'd better'; meaning that there was no other sensible course to pursue ; you couldn't reasonably call the universe good or bad, because you couldn't be 'for' it or 'against' it ; the universe is not in need of our partisanship, nor in danger from our hostility ; all it asks of us is that we should see it as it is, face it, accept it. Now that is all Moses asks of us. He is dead ; the battles which he fought have long ago been won and lost, the causes that interested him have long ago been heard and judged. His work is done ; friends cannot help him, enemies cannot hurt him ; advocacy and malice are

alike, for him, powerless. The only thing left for us to do is, if we can, to understand him : to 'accept' him for what he was, to see how he lived and what he did when he was alive.

Does this mean that the historian is to give up using the words good and bad, to forget his moral principles and lose his sense of values, to renounce, in a word, the whole habit of getting in a sweat ? In a sense, yes ; in another sense, no. He certainly ought to give up labelling his *dramatis personae* as good and bad. Indeed, today no decent historian would hesitate about this ; he gave it up long ago, and it only lingers in the slum-districts of historical thought—the dark places where history of a sort is bullied into the service of political and religious propaganda. But this does not mean forgetting his moral principles. On the contrary, it means remembering them with a quite new vigilance, but applying them not to the facile praise and blame of others—who are not in a position to reply—but to the harder task of controlling his own conduct. For, *qua* historian, he has a duty to perform ; his duty is to discover the truth and tell it without fear or favour ; and as a matter of fact the errors into which historians fall are never due to mere honest ignorance but always to some failure in their own sense of historical duty, some unfounded assumption or misplaced trust, or the cruder sin of anxiety to make a case or haste to finish writing a book. The historian who gets nearest to the truth is the historian who spends most pains in examining his conscience.

It may be suggested that we have here a principle capable of wider extension. The modern historian does not call Henry II a bad man because he quarrelled with Becket; and he would not admit that this forbearance betrays a weakness in his own moral standards ; on the contrary, he would say it was a sign of moral soundness, of a highly moral determination to do Henry justice. Now why should we not extend this principle, say, to the history of art ? Suppose someone to argue that a given period of art-history is a bad period, because its artists no longer show the same exquisite sensitiveness as those of an earlier age ; may we not reply, ' it is your business, not to deplore the lack of aesthetic sensitiveness in others, but to display it in your own person, by discovering the beauties of this art to which you have shown yourself blind ' ?

Two instances will make the point clear. In the eighteenth century, people of taste, who were not afraid to speak their mind, used the strongest possible language in describing the ugliness, the clumsiness, the tastelessness, of medieval architecture. Smollett, who was

typical of his age, speaks of York Minster in terms expressive of sheer disgust.[1] He was perfectly sincere; and his very emphasis shows that it was a question not of an inartistic person's lack of interest in art, but of a person interested in architecture who feels that Gothic architecture is a blot upon the face of the earth. Two hundred years later, Professor Petrie[2] describes the sculpture and architecture of the thirteenth century as the culmination, so far as concerns these arts, of all modern civilization; as an achievement intrinsically almost equal to that of Graeco-Roman antiquity. Precisely where Smollett found the deepest degradation of modern art, Professor Petrie finds its loftiest triumph. Each writer fairly represents the general taste of his time, and each is a sincere and qualified spokesman of that taste. Which is right?

To say that Professor Petrie is right because he is our own contemporary would be to trust altogether too completely in the maxim *les absents ont toujours tort*, and involve the uncomfortable corollary that two hundred years hence, or less, Professor Petrie and ourselves will all be as wrong as Smollett is today. But how else are we to answer? Leibniz said that all philosophers were right in what they assert and wrong in what they deny; may we say that critics are always right when they assert the value of a period and always wrong when they deny it? At that rate, Smollett would be right to admire classical architecture, and right to admire the neo-classic of his own times, but wrong to deny all merit to medieval Gothic. The degradation of medieval art would thus be simply a blind spot in the eye of the beholder. If now we apply the same hypothesis to Professor Petrie, we find that, for him, the period of degradation comes between the classical and the medieval, and is represented by the incised figure of Bellicia on an early Christian slab in Rome.[3] Let us assume—it might be denied—that this slab is a fair and favourable example of an age which is also that of the Throne of Maximian and the consular diptychs; and then let us ask, is it

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[1] *Humphry Clinker* (Works, ed. 1806) p. 200. After describing the interior as a vast charnel-house, he goes on, 'the external appearance of an old cathedral cannot be but displeasing to the eye of every man who has any idea of propriety or proportion', and especially objects to the 'long slender spire', which 'puts one in mind of a criminal impaled'. It is safe to attribute Matthew Bramble's opinions to Smollett himself.

[2] *Revolutions of Civilisation*, 1922, p. 60 etc.

[3] *Revolutions*, p. 6 (fig. 2), p. 59.

possible that the utter badness of this art, like the utter badness of York Minster, depends merely on the critic's lack of sympathy? Is it conceivable that at some future date this Byzantine way of doing things (to give it that name for the sake of a name) may come to be recognized as a fundamentally right and good way, as the Gothic way of doing things came to be recognized by the work of the Romantic movement?

To ask the question is to answer it. Already, since Professor Petrie's book was written, the movement of fashion has set decisively

THE GRAVE STELE OF BELLICIA
(*From* Agincourt's *History of Art*, 1823, ii, pl. 7)

towards Byzantine art, and plenty of aesthetes today will turn back to the picture of Bellicia as to one of the most impressive things in the book. Crude it is; unskilful; anatomically imperfect (so, for that matter, is the Ludovisi throne); yet the vigour of its drawing, the purposeful economy of its line, the intense and rapt expression of the

PLATE II

THE STELE OF HEGESO, ATHENS

facing p. 439

full face and the upward gesture of the transfigured arms, give it an unearthly beauty that is not to be compared with the earthly beauty of the stele of Hegeso[4]—not as superior, nor as inferior, but as different. Here Spengler has improved upon Petrie ; Byzantine art, which for Petrie seems to be a mere aberration, a trough between waves, a phase whose only qualities are negative qualities, varying kinds of badness, has become for Spengler a positive movement, authentically and eloquently expressing its own proper ideals.

Where the eighteenth century saw a trough, Professor Petrie sees a wave ; where Professor Petrie sees a trough, Dr Spengler sees yet another wave. Where is this process to end ? Are there really an infinite number of waves, all overlapping each other, so that by the time one has sunk into its trough, its place has been taken by another, or quite a number of others successively ?

'The dark ages', says Dean Inge, in his lecture on the Idea of Progress, 'knew that they were dark'. Did they ? Did the Venerable Bede, and the carver of the Bewcastle cross, and John the Scot, called Eriugena, know that the spirit of their time condemned their search for knowledge and beauty to futility ? There is a sense in which all human effort is futile, and every age dark ; the greatest of Venetian painters died full of years and fame with on his lips the words : *è faticoso lo studio della pittura, e sempre si fa il mare maggiore ;* and Newton's comparison of himself to a child on the seashore might be taken as evidence that the classical age of modern physics was a dark age and knew it. But the darkest age is not so dark that men cannot see the next step before them ; and the lightest age is no lighter.

Not only are there no dark ages, except in the sense in which every age is dark, and in the sense of ages which this or that historian dislikes and misunderstands, but there are, with the same two reservations, no decadences.

In history, *tout lasse, tout passe, tout casse ;* everything decays, and all movement is a movement away from something, a loss of something won, a withering, a death. The growth of the steamship is the passing-away of that splendid thing, the sailing-ship ; the rise of firearms is the decadence of archery ; the rise of Christianity and the unearthly beauty of Bellicia is the death of Paganism and the earthly beauty of Hegeso. And it is perfectly correct to speak of the fifteenth century as the century of the decline of archery, of the sixteenth

[4] *op. cit.*, fig. 1.

as the century of the decline of the manuscript book, of the seventeenth as that of the decline of polyphonic music, of the eighteenth as that of the decline of absolute monarchy, and of the nineteenth as that of the decline of the sailing-ship. It would seem, therefore, that European civilization, expressing itself as it does through these various organs, has been dying by inches for an unconscionable time. Surely it owes a word of apology to the prophets gathered round its death-bed ; if not in the style of King Charles, at least in that of Socrates, when to his friends' tearful question 'where shall we bury you'? he replied ' where you will, if you can catch me'. For this dying by inches is merely a synonym for life ; when archery, or counterpoint, or the full-bottomed wig, shows symptoms of decay, that merely proves that the spirit of man is no longer in it ; it is not here, it is risen ; it has passed into another vehicle, and the mourners who bewail its death are all unaware that it is recreating itself in a new form beneath their very eyes.

In that sense, every age is an age of decadence. The Romans of the great age of Caesar were right enough to lament the lost *mores maiorum ;* they saw that in the splendid blossoming of the genius of their race something had perished ; some moral quality, never to be replaced, whose loss could never be quite compensated, was gone. So the Athenians of the age of Phidias, had they cared for history as much as the Romans, might have known that their Maidens of two generations ago had a delicate and cryptic beauty that no Phidias could ever recapture. But, it is constantly maintained,—and this is the essence of every cyclical theory of history—some ages are ages of decadence pure and simple, ages of mere decadence, periods of decay *par excellence*. Michel Angelo, doubtless, could not have carved the kings of Chartres, if he had tried; but he could do something as good, or better. Thorwaldsen could not have carved the tomb of Lorenzo ; but also, he could not do anything as good. Therefore the decadence of sculpture sets in at some time after Michel Angelo, and has made visible progress by the nineteenth century.

The answer to this is that though Michel Angelo and Thorwaldsen are both called sculptors, they were not trying to do the same thing, and therefore the question which did it better does not arise. If we take a single art and study two different phases of its development, we always find them differentiated by a difference of the ideal aimed at. For instance, early Renaissance architecture aims at emphasizing the structural lines of the building, the lines of thrust and stress ; it makes its patterns out of these lines, so that the building seems to

PLATE III

GREEK DRAWING FROM A VASE IN THE ASHMOLEAN MUSEUM

Reproduced by permission

facing p. 440

have its bones drawn on its surface. Baroque architecture, on the contrary, growing directly out of early Renaissance, deliberately conceals the bones of the building and revels in curved and twisted lines whose purpose is precisely to contrast with the lines of thrust which the architect and the intelligent spectator know to be there. Hence Baroque appeals to a different kind of mood, talks in a different language, strives after a different ideal, from early Renaissance. Just as Baroque sculpture, in Bernini, delights in forgetting the hardness and brittleness of stone, and employs its virtuosity to make its marble soft like flesh, pliant like cord, or vibrant like foliage, so Baroque architecture deliberately conceals the engineering of its structures and makes them look as if they were moulded in a plastic material, and crowned with domes as imponderable as the rising moon. To say that one or other of these two ideals is inherently better than the other, to call this, in a derogatory sense, primitive, or that decadent, is to betray a merely personal predilection ; or less indeed than personal, because certain not to survive honest personal scrutiny of the work supposed inferior. Once you come to see what the supposedly decadent school is driving at, you see that it has a legitimate and genuine problem of its own and is handling it in the only possible way. But before you have come to see that, you can only account for the facts by a theory of mere decadence : by supposing that the later people were trying to do the same thing as the earlier, but were unable to do it so well. This theory, it may be said without hesitation, is always false. It always shows failure to understand what the later people were driving at. To take a few examples : modern music may be called decadent relatively to Bach because no modern musician has the technical skill to write a Bach fugue. But no modern musician wants to ; he wants to handle masses of orchestral colour, and by comparison with the orchestral colour-composition of Richard Strauss, that of Bach is crude to absurdity. Anglian sculpture may be said to decay after the Bewcastle cross ; but the later sculptors were not trying, and failing, to reproduce the linear filigree-work of the early style ; they were trying to move away from it to a style of broad poster-like effects,[5] to make a design that would 'carry' across a churchyard; and from that point of view they improved vastly on the Bewcastle artist's achievement. Professor Petrie points to the decay in the drawing of the hieroglyphic hawk in the sixth dynasty ; but his examples suggest that the so-called

[5] W. G. Collingwood, *Northumbrian Crosses*, p. 49.

' decadent ' hawks are really graphic symbols far more convenient to the writer's hand than the naturalistic pattern which preceded them. The artist has stopped drawing and begun to write ; or rather, he has ceased to allow his draughtsmanship to distract him from the work of writing.

From this point of view it is desirable to bestow a glance on the idea of progress.[6] In its crudest form—a form in which probably no one has ever maintained it—the idea of progress would imply that throughout history man has been working at the same problem, and has been solving it better and better. Now this is not wholly untrue. There is a sense in which, in any department of human life—politics, for instance, or poetry—there is only one single problem, constant throughout all ages. And if anyone asks why we do not revive the Greek city-state, we may fairly answer that it has been tried, and has served its turn, and we think we can do better than that nowadays. To say that, is to commit oneself to the doctrine of progress ; not a mechanical or automatic progress, but a progress which is nothing but the corporate life of mankind remembering and learning by its own past ; refraining from putting back the clock not because it cannot but because it will not, because it thinks the present, with all its drawbacks, better than anything it knows about the past.

Justice is not always done to this idea. There is more in it than is recognized by those—generally people with no very deep interest in history—who idealize this or that phase of the past and, because they only know its brighter side, think they would prefer it to the present ; or by those utterly unhistorical minds that think they can eat their cake and have it too, that they could have Periclean Athens without the massacre of Melos and the Middle Ages without the Black Death. There is probably no one, deeply versed in any period of past history, who, if a fairy offered him the choice of going to live in that period or continuing to live in the present, would not prefer to live in the present.

But the choice cannot be offered, and the problem cannot arise. Moses is dead ; and because the past is past, we cannot rationally either praise it at the expense of the present or decry it by comparison with the present. We ought not to call it either better than the present or worse ; for we are not called upon to choose it or to reject it, to like it or to dislike it, to approve it or to condemn it, but simply to accept

[6] J. B. Bury, *The Idea of Progress*, gives an invaluable account of the growth and development of the idea.

it. In one sense, the problem of politics is always the same ; but there is an equally important sense in which it is always different. At one time the problem may be how to impose on a centrifugal society of feudal barons a single law and the centralized government of a single king ; at another time, it may be how to create, in a too centralized country, bureaucracy-ridden and apathetic, some kind of local political initiative. These different problems call for different solutions, and it is meaningless to assert that the system of local government which meets the latter situation is either better or worse than the strong personal monarchy which meets the former. Each is, so far as it succeeds, absolutely the right solution for its own problem, and not relevant to any other. People with no eye for the intricacies of an actual political situation often deplore the ' sentimental ' ideals of modern democracy, and sigh for the strong hand of sixteenth-century monarchy ; not realizing that modern democracy can afford to assert freedom as it does precisely because the nations that accept its ideals have thoroughly learnt the lesson of obedience to law, and are now in more danger from despotism than from anarchy.

The business of the historian is to discover what problems confronted men in the past, and how they solved them. These problems were always in one sense identical with each other and with his own, and in another sense all different and unique ; thus in one sense all history is one, and in another sense it is composed of an infinite number of distinct and at least provisionally separable episodes. But however much an historian insists on the unity of history, it is impossible for him to deny its plurality, the gulf between any two phases in the past, due to mere lapse of time, which creates changed circumstances and therefore demands different ways of reacting to them. And however much he insists on its plurality, there is still some unity running through it in virtue of which he calls it all history ; it is held together subjectively in the unity of his own historical thought, even if all other bonds fail. But the objective bond of history is continuity. This means that the solution of one problem is itself the rise of the next. Man is not confronted by changing circumstances outside himself ; or if he is, that belongs to the mere externals of his life. The essential change is within himself ; it is a change in his own habits, his own wants, his own laws, his own beliefs and feelings and valuations ; and this change is brought about by the attempt to meet a need itself arising essentially from within. It is because man is not content to react automatically to the stimulus of nature that he is man,

and not a plant or a mere animal ; his humanity consists in his self-consciousness, his power to mould his own nature, which comes simultaneously with his awareness of that power. Man's action is the result of his dissatisfaction with himself as he is ; the result of the action is the creation of a new self, and this new self gives rise to a new problem, and so for ever. This succession of problems, each solved in the only way in which it can be solved, because solved by the output of all the powers at the agent's disposal, is the course of history. The historian may not always be able to see it so, but that is the way it always happens. Now such a course of events may be truly called a progress, because it is a going forward ; it has direction, everything in it proceeds out of what has gone before and could not have happened without the occurrence of its past. Every detail of the past is somehow necessary to the being of the present, and thus the present is truly built upon the past.

But though history is in this sense a progress and nothing but a progress, it cannot be so in any other sense. No one of the phases through which it moves is any better, or any worse, than any of the others. In each phase, men found themselves confronted by a unique situation, which gave rise to a unique problem, or the eternal problem in a unique form ; in each phase, they did their best to solve this problem, for their whole life consisted simply in living, living under the peculiar circumstances which made life a problem of a peculiar kind. To live was to solve that problem, the condition of surviving until the problem changed ; to die was to bequeath a different problem to their successors.

So far as we can see history as a whole, that is how we see it ; as a continuous development in which every phase consists of the solution of human problems set by the preceding phase. But that is only an ideal for the historian ; that is what he knows history would look like if he could see it as a whole, which he never can. In point of fact, he can only see it in bits ; he can only be acquainted with certain periods, and only competent in very small parts of those periods. It is no blame to Smollett that he dislikes Gothic ; he has not had time to study it ; that is to say, his civilization has not had time. Give it time, and it will turn to Gothic and ' discover ' it, and an infinity of other things too. For humanity studies its history somewhat as Tristram Shandy wrote his life ; it takes two years to write the history of a day ; but humanity can do what the individual writer cannot, and—subject to the maintenance of life on the planet—pursue the process *ad infinitum*.

At any given moment, therefore, the historian can only present an interim report on the progress of historical studies, and there will be gaps in it. These gaps will appear as breaches in continuity, periods in which the historian loses track of the development. Necessarily, therefore, the history of these gaps will appear an irrational history, a history of muddle and failure and misdirected energies, the history, in a word, of a Dark Age. It may be objected that the gaps ought to appear as mere blanks ; not as an irrational history, but as the absence of any history whatever. This would be so, if the historian's ignorance concerning these periods were complete ; but in point of fact there are many things, at any given moment in the advance of our knowledge, concerning which we know just enough to make them appear puzzling and unintelligible. This is so in historical studies, as elsewhere. Smollett knew enough about the Middle Ages to know that they had a taste in buildings very different from his own ; not enough to see why they had that taste. His condemnation of the Middle Ages as a period of decadence was simply a confession that his own medieval studies—or rather, those of his entire generation—were in an unfinished and unsatisfactory condition.

In this condition, we see history split up into disconnected episodes, each episode forming a relatively intelligible whole, separated from its neighbours by dark ages. That is the point of view from which we see history in cycles. Each period with which we are tolerably acquainted, each period which we understand well enough to appreciate the problems and motives of its agents, stands out as something luminous, intelligible, rational and therefore admirable. But each period is an island of light in a sea of darkness. If we ask why it arose out of barbarism, and why it relapsed into barbarism, we cannot answer ; and the reason is that if we knew enough to answer the question we should cease to ask it ; for if we knew exactly how the Roman Empire (for instance) declined and fell, what it changed into and how, then the Roman Empire would be to us no longer an island of light in the midst of darkness ; the light of our own historical knowledge would have illuminated the Dark Ages and they would no longer appear as dark ; we should see that the Roman Empire, instead of simply disappearing, changed ; that its outward forms died, while the spirit that had filled them was growing up with unimpaired vigour to find expression in others no less worthy of itself. But so long as we do not know this, so long as we have not yet learnt what the men of the Dark Ages were driving at, we shall necessarily

continue to think either that they were driving at nothing or that they were trying to be Romans, and failing.

The cyclical view of history is thus a function of the limitations of historical knowledge. Everyone who has any historical knowledge at all sees history in cycles ; and those who do not know the cause think that history is really built thus. When they come to settle the exact position and rhythm of the cycles, no two exactly agree ; though a certain measure of agreement is found among contemporaries, owing to the fact that the historical knowledge of a given generation, and therefore its historical ignorance, is to a great extent common property. Hence it is easy to believe in a general agreement, and to suppose that the differences of opinion are mere matters of detail[7] which the advance of scientific history will dispel. That belief is a sheer illusion. A comparison of views based on a wider induction, like our comparison between Smollett and Professor Petrie, will show that the divergences go down to rock-bottom. And it thus becomes reasonably certain that further advances in knowledge will not remove the discrepancies but will cause them to reappear in ever fresh places, constantly upsetting the fundamental valuations on which each successive system of cycles was based. Some system of cycles there must always be for every historical student, as every man's shadow must fall somewhere on his own landscape; but as his shadow moves with every movement he makes, so his cyclical view of history will shift and dissolve, decompose and recompose itself anew, with every advance in the historical knowledge of the individual and the race.

[7] Thus Messrs Goddard and Gibbons (*Civilisation or Civilisations*, 1926) set out confessedly to popularize Spengler, but announce without apparent misgiving that 'it is not always possible to accept his interpretations' and in fact modify his scheme to taste.

Notes on the Types of English Villages and their Distribution

by William Page

LITTLE has been done towards solving the problem of the Saxon settlement of England by studying the types of villages and their distribution. Professor Maitland saw the importance of the subject and pointed out how valuable in this respect was the ordnance map ' that marvellous palimpsest which under Dr Meitzen's guidance we are beginning to decipher'.[1] Helpful, however, as the ordnance maps are, they cannot be read alone, a knowledge of the archaeology, history and topography of the district under review is a necessary equipment for such an investigation. The remarks here made are tentative and are offered in the hope they may be an incentive to others with local knowledge to examine the evidence of their districts.

Professor Maitland, following Dr. Meitzen and others, has adopted two main types of settlements, namely, the scattered or dispersed, and the nucleated or clustered. These two types probably comprehend all forms of settlements, but certainly the nucleated type and possibly the scattered type, show many variants which it may be well to indicate before a methodical study of the subject can be made. I have elsewhere suggested the following classification of English towns and villages which will no doubt require modification and amplification but may meet a want for a preliminary inquiry; (1) scattered or dispersed settlements, (2) nucleated or clustered settlements off lines of communication, (3) nucleated settlements on lines of communication, (4) ring-fence settlements, (5) towns with bridge heads and double towns, (6) towns of gridiron plan, (7) towns of spider's web plan, (8) Bastide towns. Except for the first of these classes all of them are nucleated or clustered, and to this wider division I propose to devote my attention. It may perhaps be pointed out, however, that

[1] Domesday Book and Beyond, 15.

the scattered or dispersed settlements occur chiefly in Wales and in the west and north of England. They are found throughout Cornwall, in Devon, Somerset and the open parts of the Welsh border counties, in Yorkshire and Derbyshire, and probably they are the origin of the great parishes with their numerous townships of the other northern counties. They were adapted for a pastoral people and are generally to be found in moorland or mountainous country which has become divided into large parishes. They consist of hamlets and single houses or small groups of houses scattered somewhat promiscuously throughout a district. The principal hamlet from which the settlement or parish takes its name—which was probably the meeting place of the district and where the church was eventually placed—was generally on high land or a main road and frequently at cross roads, bridges, or such like places of nodality.

A development of scattered hamlets must be mentioned which has quite a different origin to those just referred to. The subinfeudations which came as a consequence of the Barons' Wars of the twelfth and thirteenth centuries, led to the cutting up of some of the great manors into smaller holdings. A notable instance of this development was at the large manor of Wheathampstead in Hertfordshire, belonging to the abbot and convent of Westminster. Here the extensive waste lands were divided into holdings of a carucate of 120 acres and were purchased mainly by London merchants, probably the war profiteers of the day, who were apparently under an implied obligation to build a house and clear their lands. In this way several scattered hamlets grew up in what was originally a nucleated settlement. There are similar indications in many large manors elsewhere.

The small groups of settlers who dwelt in nucleated villages had many advantages, both defensive and economic, over the inhabitants of the dispersed settlements. Nucleated settlements that were established for trade were necessarily concentrated along a road or river on each side of which their territories generally spread. The purely agricultural settlers on the other hand, placed their villages in the midst of their territories some way from the lines of communication beyond which their lands did not usually extend. The object of the latter settlers was to have easy access to all parts of their fields and security from evil disposed persons travelling by the highways. Thus for the earliest settlements of this type, the roads and rivers forming the lines of settlement were adapted as boundaries. Although through the lapse of nearly 1500 years considerable alterations have been made

PLAN OF THE PARISH OF BYGRAVE, HERTS., SHOWING NUCLEATED VILLAGE OFF THE ROAD

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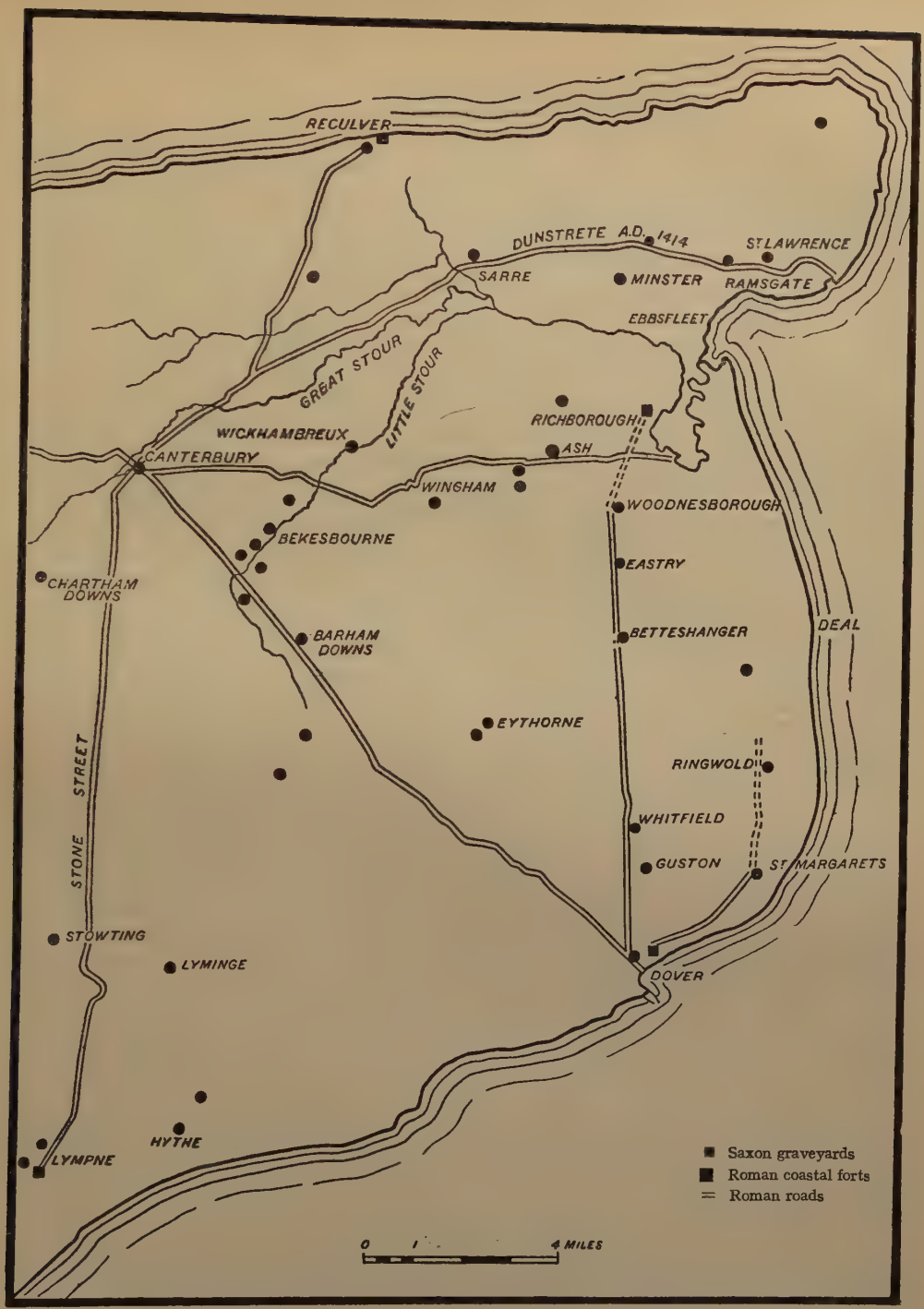
in the settlement areas, now represented by parishes, yet the general lines of settlement are in many cases fairly well indicated. The parish boundaries have naturally become irregular owing to the formation of new settlements within the ancient areas and the transfer of land and tithes from one settlement to another. These changes have occurred more frequently where the ancient limits are not marked by fixed lines, such as roads or rivers.

The nucleated settlements on the roads having developed largely into trading towns and halting places for travellers have in many instances lost their village aspect. The essential features of settlements off the lines of communication, on the other hand, have generally survived. The village of the latter type was usually set on rising ground. The lord's residence, later the manor house, is found in the highest part and, in accordance with the practice of the tenth and eleventh centuries and later, with the church adjoining it. We cannot do better than examine the fairly well known example of Bygrave in Hertfordshire, lying to the east of the Great North road and aligned on to the Icknield way which forms its south eastern boundary. On the highest part of the village are the site of the manor house, now destroyed, and the church, with a moat surrounding them ; to the west of which lies the village street. The inclosed pasture lands lie immediately around the village, and beyond on all sides to the parish boundaries are the open arable fields covering nearly 1000 acres, without hedge or fence. Uninclosed roads or driftways connect the village with the main roads. The boundary of the parish extends over the line of the Great North road in order to get water power from the river Ivel to drive the manorial mill. There is a marl pit to give marl for the land, a copse to provide fuel and timber and a coney warren to supply game. We have here a very interesting survival of a self-contained community which it is to be hoped will be preserved in its present condition as an historical monument. It is only occasionally that we find such a complete example, but the general lay-out of settlements of this type is often to be met with in the midland and eastern parts of England.

Let us take the evidence of one or two districts to illustrate the types of nucleated settlements and their distribution. It may perhaps be assumed that the earliest settlements in this country after the withdrawal of the Roman legions, were those made by the Jutish invaders in Thanet and East Kent in the middle of the fifth century. It is pretty clear that a base was formed by the invaders at the



MAP OF EAST KENT SHOWING EARLY ROAD-SIDE AND RIVER-SIDE SETTLEMENTS

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mouth of the Stour. To gain control over East Kent, it would be absolutely necessary to hold Canterbury, the country being covered by Roman roads which with the villages and waterways all converged on that city. At St. Lawrence, near Ramsgate and at Ozengell a mile to the north-west, there are early Saxon or Jutish cemeteries which no doubt served the settlements that formed the base for the early invader. The river Stour is so serpentine in its course from its mouth to Canterbury and passes through so wide a district of marsh land, that it is obvious these early immigrants abandoned it, as a means of transport, for the more direct course on higher land which was afforded them by the Roman roads. Along the road from Ramsgate to Canterbury, which if not a Roman road, was at all events in use in the fifth century, there was an early Saxon cemetery indicating a settlement at Ozengell and another at Telegraph Hill north of Minster and a large and wealthy cemetery at the road-side settlement at Sarre. Along the Roman road from Sandwich or Stonar to Canterbury are the road-side villages of Ash, Gilton, Wingham and Littlebourne, with early Saxon cemeteries. Again the village of Woodnesborough, where Saxon objects have been found, and those of Eastry, Betteshanger and Whitfield, where early Saxon cemeteries exist, are all road-side settlements. Possibly an old coast road, called the Roman road, from the eastern heights at Dover to St. Margaret's and northward, was a Roman way. At Bay Hill, St. Margaret's, on this road, is an early Saxon cemetery. From St. Margaret's there is a straight footpath to Ringwould where again there are burials of a similar date. It is curious however, that, except at Stanford two miles north of Lympne, there are no road-side villages along the fourteen miles covered by Stone Street from Lympne to Canterbury. The settlements along this road seem to belong to the nucleated type off the lines of communication, the Roman road forming the boundary between the settlements on each side for a considerable part of its length. The Roman road from Dover to Canterbury has road-side villages for about four miles outside Dover but beyond, except for Bridge which belongs to the Nail Bourne series of villages, there are no road-side villages. These two roads seem to have played much less part in the settlement of the country than the roads to the north and east, a condition which can be accounted for if the invaders had their base at Sandwich Bay.

The remaining line of influence in the settlement of the country here was that of the Little Stour and its tributary the Nail Bourne. There are nucleated villages on the river-bank at the crossing places

over the river, each with an early Saxon cemetery, namely, at Littlebourne where the ancient road from Sandwich to Canterbury crosses the Little Stour ; at Beakesbourne where the Pilgrims Way crosses the Nail Bourne ; at Patrixbourne where another Pilgrims Way crosses the river ; at Bifrons Park ; at Bridge where Watling Street crosses the river ; at Bishopsbourne ; at Kingston ; at Barham and at the important Saxon and Roman settlement at Lyminge.

It is clear that the early immigrants made their settlements chiefly along the roads and rivers east of Canterbury, but there are lines of settlement showing their progress westward. In the Stour valley there are nucleated river-side villages, where early Saxon cemeteries have been found at Chartham, Godmersham, Crundale, Broughton and Wye. Along Watling Street westward from Canterbury, there are road-side settlements at Faversham, Sittingbourne, Milton, Brompton, Chatham, Strood and Rochester. All of these towns are probably of Romano-British origin and were occupied by the Saxon invaders who, from the cemeteries they have left, appear to have been populous and wealthy. The river Darenth formed another line of settlement. Here at Horton Kirby, Eynsford and Lullington were also early Saxon cemeteries.

It will thus be seen that the prevailing early settlements in northern and eastern Kent are of the nucleated road-side or river-side type. In many instances the invader had occupied an earlier Romano-British town, but as there are several of his settlements here on the road side where there is no evidence of earlier occupation, it may be presumed he settled beside the road or river by his own free choice. There is little doubt that these Jutish immigrants were traders who would naturally settle on the lines of traffic and if, as has been suggested, they came from the Rhineland, they would be strongly influenced by Roman methods.[2] We have evidence among the furniture of distant graves in Mercia of their traffic inland, hence the importance to them of securing Watling Street and the crossing of the Thames at London, and also of having control over London, the road-centre of the whole country.

South-westward of a line drawn from Lewisham to Maidstone and from Maidstone to the Romney Marshes, no early Saxon cemeteries have been found and in this forest land no Saxon settlements were made probably till a later date. As these cemeteries with their graves containing personal and other objects belong to the pagan Saxon

[2] E. Thurlow Leeds, *Arch. of the Anglo-Saxon Settlements*, p. 121, *et seq.*

period, the settlements to which they were attached must be of a date earlier than the first half of the seventh century. The settlement of the rest of Kent was gradual, transport was slow and hazardous and the growth of population cannot have been very great. It is quite likely therefore that the forest land to the south and west was not settled until after the landing of St. Augustine in 597, and the subsequent conversion of the land to Christianity when these pagan cemeteries would shortly fall into disuse. The types of settlement in this forest district were principally the nucleated village on a subsidiary road and the ring-fence village of the late forest type.

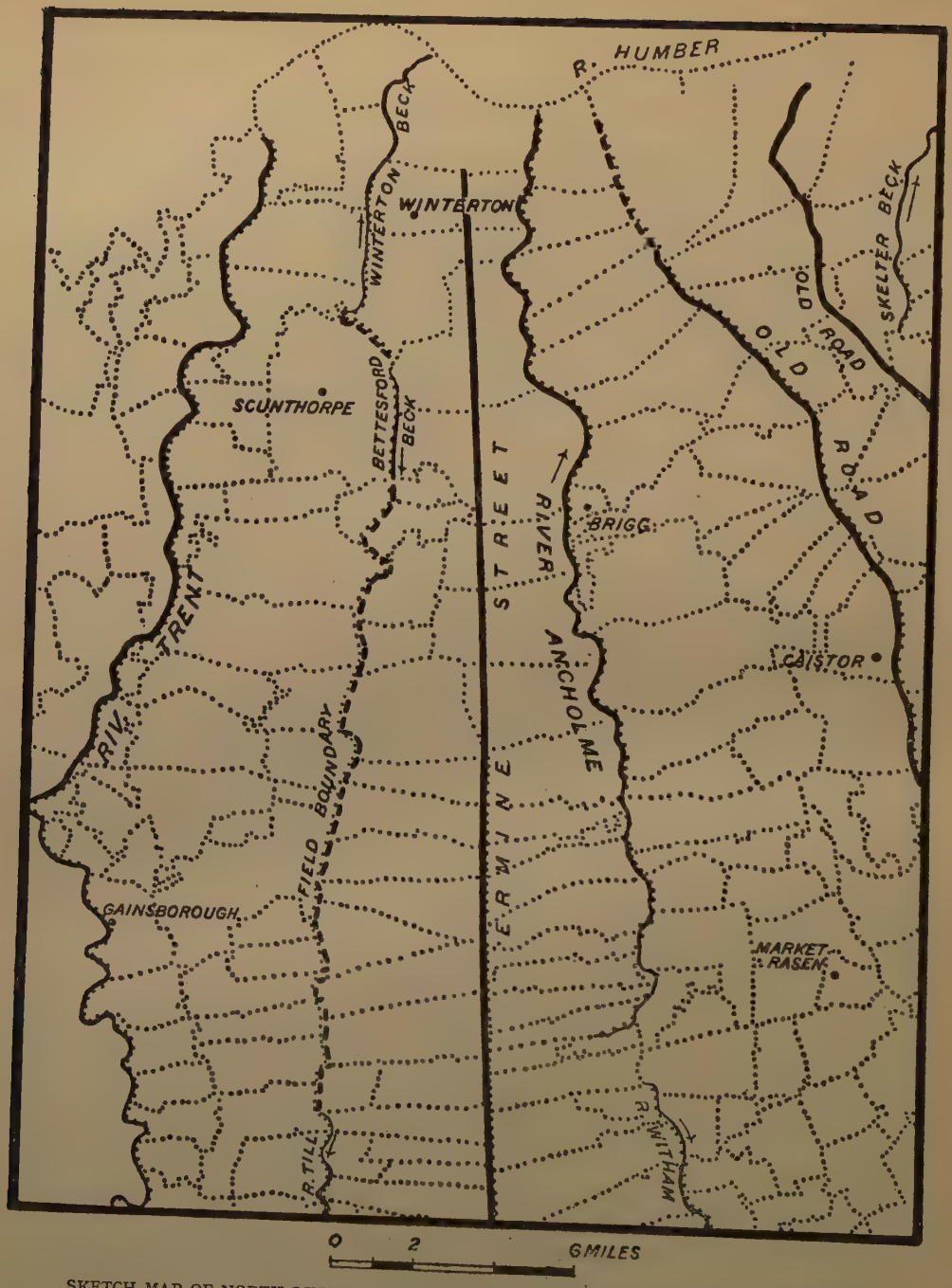
In Sussex the Roman roads seem to have formed little or no part of the scheme of settlement. The early lines of migration were along the rivers in the south of the county where a few early Saxon cemeteries have been discovered. It was to these parts probably that the first settlers came. In the forest land of the north are ring-fence and road-side settlements of a similar late type to those found in the forest land of Kent.

Very different were the nucleated settlements off the lines of communication such as are to be found in the middle and east of England. The lines of these settlements are particularly well marked in Lincolnshire, partly perhaps because they run there more or less parallel to one another. It is obvious, as we shall see, that the first bands of settlers in Lincolnshire used the rivers as their lines of migration and then adopted the Roman roads or new tracks formed for the purpose. They entered the county by the Humber on the north and the Wash on the south. From the Humber the principal rivers influencing the lines of settlement were the Trent and the Old Ancholme, and from the Wash, the Welland and the Witham with its tributary the Glen.

With regard to the river Trent we find a series of settlements going off east and west, with nucleated villages standing on the east side on the high land of the hills there rising from the river, and on the west side mostly on low land. They are about a mile from the river bank on each side, except at a crossing place over the river, where the village is on the bank itself and has occasionally a bridgehead projecting across the river. This line of settlements can be traced up the Trent through Nottinghamshire and Leicestershire, and up its tributary the Soar through the last county. The parishes which may perhaps be taken as approximately representing the territories of the original settlements, are rather irregular in the Isle of Axholme on the west side of the river. Southward of the island they become more regular. On

the east side of the river it would seem probable, from the lay-out of the boundaries, that originally the land between the Trent and the Old Ancholme was divided between only two lines of settlements—Alkborough with Whitton and West Halton (perhaps forming one or two settlements), Burton upon Stather, Flexborough, Crosby with Gunhouse, Scunthorpe, Frodingham, Brumby, Ashby with Burringham, Bottesford with East Butterwick and Holme, Messingham, Scotter and Scotton with East Ferry, on one side, aligned on to the Trent, and Winteringham, Winterton, Roxby cum Risby, Appleby, Broughton with Raventhorpe, Scawley with Twigmoor and Manton, Hibaldstow with Cleatham and Kirton in Lindsey with Redbourne, on the other, aligned on to the Old Ancholme. It will be noticed that these settlements, which are aligned on to the Old Ancholme for some fifteen miles, ignore Ermine Street both as a boundary and as a line of communication between the villages. Only at Appleby is there a village on the Roman road, and this probably because it was the site of a Roman settlement, remains of Roman buildings having been found here.

Although settlements are aligned on to the Ancholme to its source at or near Firsby, its importance southward from Kirton in Lindsey seems to be superseded by Ermine Street, along which to Lincoln a series of settlements are laid out with curious regularity. It will be observed that near the point where Ermine Street becomes the line of settlement and where the southern boundary of Kirton in Lindsey touches the street, a road branches off north eastward from the Roman road through Redbourne and Brigg to Barton upon Humber. Perhaps the mouth of the Ancholme had become silted up or the river above Redbourne was too shallow for the ships of the immigrants, and so this road was made from a new landing place at Barton upon Humber. The villages lie from one to three miles on each side of Ermine Street and on the west side are placed on the fertile and water bearing slopes of the ridge running from Roxby to Lincoln, but on the east they are on lower ground. The western boundaries of those on the west side are mostly field boundaries with occasionally a beck or small river like the Till or a piece of a lane, while those on the east side run along the river Ancholme and a tributary of the Witham, and so are on fixed lines. It will be clear from the map that many of the settlements have in the course of centuries become divided and sub-divided, thus each of the following groups of parishes amongst others apparently once formed one settlement—East and West Firsby ; Ingham and Coates ; Battleby, Aisthorpe



SKETCH MAP OF NORTH LINCOLNSHIRE SHOWING LINES OF NUCLEATED SETTLEMENTS OFF LINES OF COMMUNICATION

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and Thorpe in the Fallows ; Hackthorn and Cold Hanworth ; and North Carlton and part of Broxholme. Each village has access to Ermine Street by a road or driftway. From Kirton in Lindsey southward a line of settlement has been interposed between the settlements on the east of the Trent and those on the west of Ermine Street.

There are indications of two other lines of settlement in the north-east of the county, starting from the Humber. The more distinct of them begins at South Ferriby and passes by an ancient track, now only a footpath, which runs south eastward along the high land and joins the road from Barton on Humber to Castor and on to Horncastle. The villages lie about two miles off the road on each side. In the north, the settlements extend on the east side from the Old Ancholme to the road but southward as the space between the lines of the river and road widens, fresh lines of settlements have been established. The villages lie at the foot of the steep descent on the west side of the Wolds.

The other line of settlement is not so clearly marked. It appears to start at the Skelter Beck which meets the road from Barrow upon Humber to Louth between Ulceby and Brocklesby. The road does not become a boundary line until southward of Irby, whence for about eighteen miles to Fotherby a series of settlements are aligned on to it. The villages lie from half a mile to two miles on each side, those on the west lying on the eastern slope of the Wolds. South of Louth, the line is not traceable.

All these settlements above described are of one type and although during many centuries they have become subdivided, and intermixed, sufficient of their original forms remains to show that they must have been set out systematically and methodically. Those aligned on to Ermine Street originally seem to have had something approximating an equal frontage of between a mile and a mile and a quarter on to the road. The settlements on the west side extended back about four miles, and those on the east were of about the same length, their boundaries being fixed by the river Ancholme. Each line of settlement, one would imagine, must have been planned by some central authority and at one time. The interposed settlements, though all of the same nucleated type are not laid out, so far as can be seen, in any orderly fashion and may have been founded by squatters. Natural boundaries have been little used for these settlements and it would seem probable that there were at first no fixed limits to them. The sites selected for

the villages as a general rule lie on the slopes of the hills where water bearing and fertile lands are to be found.

It is interesting to notice that the place-names are much mixed. The name of one settlement may be Anglian and that adjoining it, obviously laid out at the same time, may be Danish. In the line of nucleated settlements off the lines of communication running along the west side of the Wolds from South Ferriby, we have Saxby, Bonby, Worlaby, Barnetby, Bigby, Somerby, Scarby, Grasby and Clixby, but they are precisely the same in type as their neighbouring parishes bearing Saxon or Anglian names.[3] It would seen probable that when the Danes overran all this country in the ninth century they drove out the Anglian owners of these settlements, to some of which they gave new names formed from their own language but the others were permitted to retain their old names. The Danes, as traders, we know favoured roadside settlements and it may well be that they made the road called Middle Street running almost parallel to Ermine Street. This road links up the villages on the west side of Ermine Street from Kirton in Lindsey to Lincoln and was possibly constructed to attract the traffic away from the Roman road and convert the villages into road-side towns.

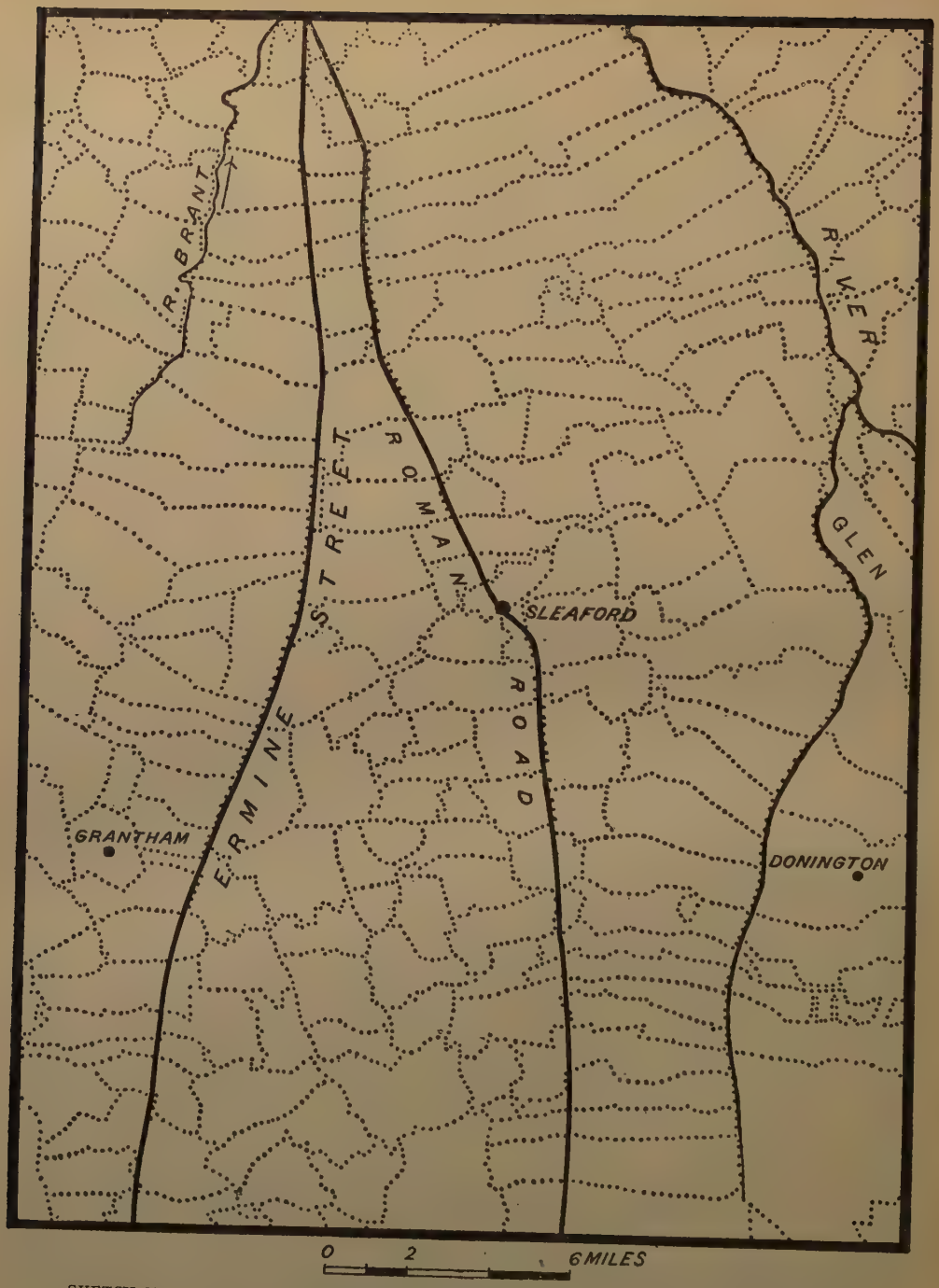
Lincoln as a walled city would naturally break up the lines of agricultural settlements. To the south of the city, however, a fresh line of settlements follows the Roman road which diverges from Ermine Street and goes to Sleaford. Probably there has been a disturbance of the boundaries of Branston, Mere and Potter Hanworth, which may at one time have aligned on to this road. From these settlements southward to Temple Bruer, the Roman road to Sleaford formed a settlement line with one series of settlements extending westward to the river Brant and another eastward to the Witham. These settlements are peculiarly long and narrow being about a quarter to half a mile in width, and in length on the west side about two miles and on the east about four miles. The villages on the western side lie on the steep western slope of the sandy ridge running south from Lincoln towards Grantham and those on the east, on the lower and more gradual slope of the same ridge on that side.

[3] This frequency of Danish place-names does not extend into the south-eastern part of the Danelaw (*Place Names of Beds. and Hunts.*, p. xix), for the reason probably that north of the Nene the land was held by conquest, whereas southward the lands were ceded by treaty with Ceowulf in 877. The most southerly point of the fighting at this time was at Peterborough (Medmenham) where the monastery was destroyed (*Anglo-Saxon Chronicle*, sub anno 870).

At Temple Bruer the road to Sleaford ceases to be the line of settlement, probably because it passes too far east from the fertile slopes of the ridge, here running north and south. The line is, however, immediately taken up again by Ermine Street, which carries it for fourteen miles to Little Ponton where the ridge is interrupted by the valley of the Witham. The settlement areas along this section of Ermine Street become less regular, but the villages are still found on the slopes of the ridge from about a mile to two miles on each side of the road. They lie on the higher slopes on the west side and the lower slopes on the east. Each village is connected with the Roman road by a subsidiary road and on the west side the villages themselves are linked up by a road which like Middle Street has become a rival to Ermine Street. The back lands on the west side are occupied by two series of settlements, aligned on to the river Witham southward to the county boundary, and westward again another line of settlement is interposed between them and those aligned on to the river Trent in Nottinghamshire. On the east side of this part of Ermine Street the settlements on the fertile lands south of Sleaford between the two Roman roads, do not seem to be set out in any regularity.

The Fen districts are not likely to have attracted the early Saxon settlers; the Fen monasteries were not founded until the tenth century when they are described as lying in desolate uninhabited wastes. There are, however, long distinct lines of settlements on each side of the straightened course of the river Glen. Those on the west side may possibly have been made in relation to the Roman road from Sleaford to Bourne and Castor, which we know was in use at the time of the early Saxon burials found at Sleaford. Although the settlement boundaries here are not now aligned on to this road the villages lie half a mile to a mile off it at the bottom of the slope of the hills running down from the Wolds. The Witham in its lower reaches flows through the fenland and was apparently used merely as a highway. North of Dogdike there is a distinct line of settlements on the west side of the river and a less pronounced one on the east. North of Martin the settlements seem to belong to the series made in relation to the Roman road from Lincoln to Sleaford already referred to. The great fenland parishes to the south of the Wash and the river Welland about Holbeach are probably of late formation. The settlements northward in the East Fen, except those aligned on to the sea coast, appear to have little uniformity in their lay-out.

Few districts in England are laid out with the same regularity as



SKETCH MAP OF SOUTH LINCOLNSHIRE SHOWING LINES OF NUCLEATED SETTLEMENTS OFF LINES OF COMMUNICATION

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are the main lines of settlement in Lincolnshire. The only recognized means of transport at the time of the Saxon invasion were the rivers and the Roman and a few earlier roads. There can be little doubt that the first settlers of this date would pass along these lines of communication and make their settlements on each side of them. Where, therefore, we have a river or road with a parish boundary running along the whole or a great part of its course and a series of settlements aligned in an orderly manner on each side, we may perhaps fairly infer that such river or road was the route by which these immigrants travelled and along which they made their earlier settlements. The settlements on the back lands with villages surrounded by their territories would be gradually formed. At first possibly they were without definite boundaries which would be left until pressure from other settlements made them necessary. For this reason they have not the regularity of lay-out which those aligned on to the roads and rivers have. Access to these back settlements was afforded by tracks or subsidiary roads from the main lines of communication. These tracks would avoid any obstruction temporary or permanent, hence the erratic course which many of our country roads take. As, however, the Roman roads, with the exception of those in East Kent, were laid out for internal communication and not for overseas traffic, they were only used as lines of settlement by the Saxon settlers when they tapped some river or creek up which the immigrants sailed, or connected one line of settlement with another. Thus we find a part of Ermine Street was brought into use as a line of settlement where it came into touch with the Humber ; the Peddlars Way through Norfolk when it reached the Wash ; the portion of Stane Street, the Roman road from Braughing in Herts to Colchester, westward of Stisted in Essex where it crosses the Blackwater ; the part of the Icknield Way which forms the boundary between Hertfordshire and Cambridgeshire and further passes through the former county, where it joins Ermine Street and Watling Street ; numerous other instances could be quoted. Another reason for the sectional use of the Roman roads in this way is that the Roman towns, being avoided by the Saxons, were no longer distributing stations.

The Saxon immigrants with their wives and children and a certain amount of baggage, would wish to disembark as near to the place where they proposed to take up their abode as their ships could be navigated ; consequently they would use the river transport as far as possible, land transport being no doubt precarious in a country that was either hostile or sparsely inhabited. In this way throughout eastern and

midland England we find the rivers formed the main lines of settlement. This idea seems to be corroborated by the evidence of archaeology which shows that the early Saxon cemeteries, which indicate settlements, lie along the rivers. We have seen how the Trent and its tributaries seem to have been used in this way; the Nene and the Ouse, after they have passed the Fenland, similarly became lines of settlement and so with most of the rivers which flow into the sea on the coasts of Norfolk, Suffolk, and Essex or into the Thames. London, the place of nodality upon which the Roman roads converged, bore little part in the scheme of the Saxon settlement of the country and so the Roman road system around it became neglected.

It is difficult to judge how this theory can be applied to western England. In Cornwall and other districts of dispersed settlements the rivers are continuously used as boundaries, but in other parts settlement lines may perhaps be traced. After the West Saxon victory at 'Deorham' in 577, the districts later known as the counties of Gloucester and Worcester were available for colonization. There could scarcely have been a surplus population in Wessex or elsewhere in England for settling these lands, therefore it would seem probable that colonists were brought from the continent. Such immigrants would sail round the coast to the Bristol Channel and thence up the rivers Severn and Avon. These rivers form continuous boundaries for settlements on both sides, which with the early Saxon cemeteries bordering the Avon and its tributaries seem to give evidence of the use of these rivers as lines of settlement.[4]

As a development of the nucleated settlement off the lines of communication, we have the village which has migrated to the road-side in order to catch the trade that the traffic brought there. These new settlements, so far as we can trace, first arose under the trading influences of the Danes in the tenth century, many of them growing into market towns of the inverted v-shaped type. Frequently the original settlement became forsaken, merely the church, manor house and a cottage or two being left; a condition that is so often to be found in Essex and Hertfordshire. The two villages are at times distinguished by the addition of Church Town and Street Town, Great and Little, North and South, East and West, Upper and Nether and the like, although such additions do not necessarily indicate developments of this kind. Sometimes the road-side settlement took a different name, as Wadesmill, the road-side settlement of Thundridge in Hertfordshire, and Fenny

[4] Cf. *The Place Names of Worcestershire* (English Place Name Soc. iv), p. xiv.

PLAN OF STEVENAGE, HERTS., SHOWING EARLY SETTLEMENT NEAR CHURCH AND LATER MARKET TOWN

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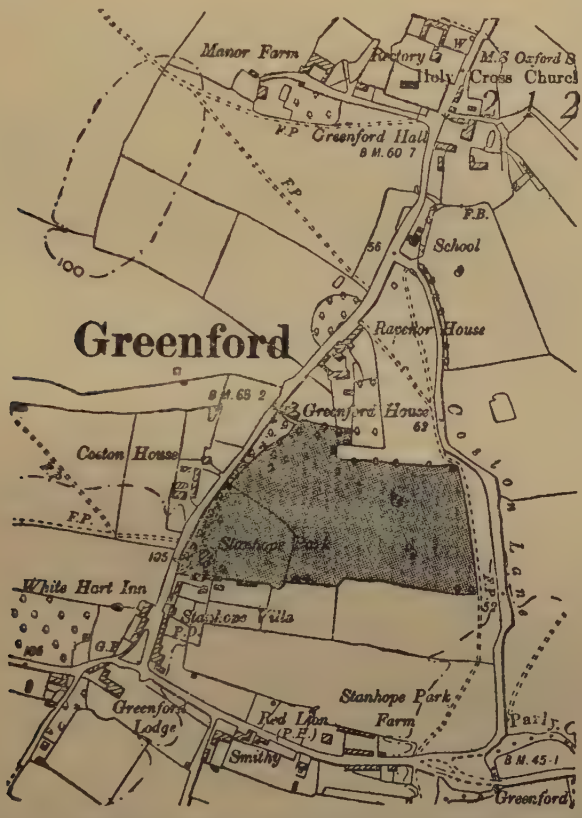
Stratford, that of Bletchley in Buckinghamshire. Occasionally the two settlements became separate parishes as in the case of North Mimms in Hertfordshire, a nucleated village off the road to St. Albans now consisting of the church and North Mimms House, which had its road-side settlement at South Mimms forming another parish in Middlesex. Many instances of these migrated villages may be found along Ermine Street; at Stevenage on the Great North Road in Hertfordshire we have a notable example of this development. The Church of St. Nicholas, the Bury or ancient manor house, and a few cottages will be seen at the north-east corner of the map here shown. These form the remains of the original nucleated settlement off the road. About three quarters of a mile to the south west a road-side village was at some time founded on the Great North Road where a market was established at the fork of the road here in 1281. By the fourteenth century the road-side town had quite overshadowed the village. A late attempt to establish a road-side market town took place at Buckland in Hertfordshire, a little south of the market town of Royston. Here the lord of the manor of Pope's Hall in Buckland tried in 1252 to found a market town on Ermine Street at a place still called Chipping. Six years later the lord of the manor of Buckland obtained a grant for a rival market at Buckland half a mile to the north. Neither attempt was successful but in 1360 Elizabeth de Burgh, who had become possessed of both manors, received licence to move the market at Chipping to Buntingford, a little further south where the road from the Pelhams to Baldock and the river Ribb, both cross Ermine Street. Here a market town with the usual inverted v-shaped market place was successfully established.

The double towns divided by rivers, such as those at Bedford, Hertford, Buckingham, Stamford and elsewhere, which originally had separate organizations and market places that were generally merged at an early date, are only a development of the bridge-head. It was necessary at the more important crossing places of rivers to establish these bridge-heads for purposes of protection, general control and levying of dues.

The ring-fence settlement occurs in forest land and will be found in Middlesex, Surrey, Kent, Sussex and Hampshire and probably other districts that are or have been forest. It consisted of an open space, now sometimes built over, encircled by a road which usually continues at the opposite ends of the enclosure. Associated with this type of settlement is the village green such as is so common in Middlesex. This form of settlement is late, probably the forest lands were not settled until the

open country had been colonized. Many seem to have been of post-Conquest foundation. They represent no doubt the original clearing in the forest in which the cattle could graze with safety. There would not have been room for any systematic agriculture and the settlers were probably woodmen.



PLAN OF GREENFORD, MIDD., SHOWING A RING-FENCE SETTLEMENT

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The small market town usually with a market place made by the widening of the roadway in the shape of an inverted V, is to be found all over England. It is naturally the most convenient form for a town of the kind, which must necessarily be on a high road. Facing the market place are the houses which, if the town is a borough, were generally the burgages with their gardens extending back in long

PLAN OF ST. ALBANS, HERTS., REDUCED FROM PLAN OF BENJAMIN HARE, 1634, SHOWING ELONGATED V-SHAPED MARKET-PLACE

narrow strips. The ends of these gardens usually formed the borough boundary. The market places in many instances have now been built over and are covered by shops and intricate courts and alleys. At first places for booths and stalls were granted which as early as the fourteenth century became permanent structures and developed into shops. The church stands at the end or on one side of the market place. A good example of such a development is St. Albans which we know was laid out by Abbot Wulsin about 950. The market place is formed by the spreading out of the road from the north towards the abbey at its south end, the church of St. Peter standing at the apex of the triangule. We have record that the Abbot of St. Albans encouraged settlers by making grants of material with which to build their houses. He divided the frontage on the market place into plots with a depth going back to the borough boundary, called Tonman's Dyke, which may have been defensible. Every change of direction of the borough boundary was marked by a cross. The southern part of the market place has become built over in the manner already indicated. At each of the three entrances to the town the abbot built a church assigning to it a very large parish from the surrounding district. The roads leading to the town met in the market place so that all traffic was compelled to pass through it, a point which was always looked to in medieval market towns even to the diverting of roads in order to accomplish it. Another example here shown is that of Hitchin in Hertfordshire lying at the intersection of the road to Bedford and the Icknield way. Like St. Albans it probably became a market town in the tenth century.

The choice of sites and development of plans of cities and larger towns are subjects beyond the scope of my paper and have been dealt with on many occasions of late years. As yet we scarcely know enough of the subject of the development of village sites to come to any definite conclusions as to racial, regional and chronological influences upon them. The dispersed types are generally assigned to Celtic origin and the nucleated to Teutonic, but in the lead-mining district of West Derby, on the steep eastern bank of the river Dove, among a series of early Saxon cemeteries, we find ourselves in the midst of dispersed farms and hamlets. The land, however, is quite unsuitable for agriculture, and the Saxons who settled there no doubt saw the futility of using their methods of cultivation requiring concentrated villages. In some places as in Cheshire and Shropshire, where the Saxon penetration was of a later date and a milder form we seem to get a mixture of dispersed and nucleated settlements, the latter being aligned

on to rivers and the former perhaps left on the back lands. The nucleated settlements may approximately follow in distribution the areas of the two and three field systems as shown by Dr. H. L. Gray in the *English Field Systems* but there are variants in both the forms of settlements and systems of cultivation which require correlation.

PLAN OF HITCHIN, HERTS., SHOWING V-SHAPED MARKET-PLACE, BUILT OVER

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Probably soil, climate and position are also factors not to be ignored in the question of the distribution of types of settlements. We shall not be able to draw reliable conclusions until we have learnt to decipher Professor Maitland's palimpsest district by district.

PLATE I

THE DORCHESTER CIRCLES, OXFORDSHIRE

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facing p. 469

Notes and News

AIR-PHOTOGRAPHS NEAR DORCHESTER, OXON. (PLATES I-II)

By the merest accident a most important discovery was made last June by two officers of the Royal Air Force stationed at Farnborough (Flight-Lieuts. W. E. Purdin and B. T. Hood). The two large circles shown on plate I were entirely unknown until the negative arrived, with several others, at the Ordnance Survey Office last September. The exposures were made in the immediate neighbourhood of Dorchester at 10.30 a.m. on 16 June 1927. Some of the crop-marks revealed may have been intensified by the long dry spell which lasted from 12 April to 15 May.

The circles are situated in a large arable field lying to the north of Dorchester, between the Oxford and Abingdon roads. The field itself is absolutely flat; the levels taken along the roads which bound it nowhere differ by more than four feet (161 to 165 feet above sea level, and about 10 feet above the Thames). There is not the slightest sign of the circles visible to an observer on the ground; they are visible only from above, under certain favourable conditions of weather and crops. In order to test the circles and if possible ascertain their date, I decided to dig a trench through each of them.[1] This was on the assumption (which proved correct), that the circles represented silted-up ditches, revealed on the negative by the crops. The digging occupied two days, and the filling-in one (10-12 October 1927); and was carried out by two men under the direction of Mr R. G. Collingwood and myself.

Before we could begin digging at all, it was necessary to find the circles! This could only be done by measurements on the photograph. It will be observed that an arc of the outer circle is only faintly visible, owing to a difference in the crops. The line dividing these crops[2]

[1] Thanks are due to Mr R. Ryman, of Didcot, the owner, and Mr M. Fuller, of Dorchester, the tenant, for permission to dig the trenches.

[2] The northern field containing the inner, and most of the outer, circle had a crop of horse-beans; the southern one barley. Note the different reactions of these two crops to the ditches. Had the whole field been sown with barley, they would hardly have been visible at all.

cuts the outer circle twice, and touches the inner circle tangentially. We decided to cut a trench first through the inner circle, starting from the crop division. If our measurements were right, the southern end of our trench should start on the southern lip of the ancient buried ditch ; and this proved to be the case. (Our trench was 20 feet long, and 4 feet wide).

We found that there was a natural deposit of reddish-yellow loam or brick-earth, about 2 feet 6 inches in thickness, resting upon loose sand. This sand was plainly seen at the southern end of the trench. At the other end the sand was not reached until we had gone down through 6 feet 4 inches of brick-earth, the silt filling of the old circle-ditch. (Actually, before we could clear down to that depth the water-table was reached ; but with a fork one could feel the stoney layer on the top of the sand). The deepest point of the circle-ditch was at the north end of the trench ; it must originally have been not less than 36 feet across from lip to lip. There were no finds but a large animal-bone, about 5 feet deep.

The second trench was laid out to cut the outer circle at the point where that is cut by the crop-division. The preliminary measurements demanded more *finesse* this time, since we were planning to hit an intersection, instead of a point of tangential contact. We aimed at getting the middle of the circle-ditch to fall in the middle of our trench, and we actually succeeded in getting within 4 feet of doing so ! Again we found a layer of 2½ feet of brick-earth covering the sand. The inner lip of the circle-ditch was apparent at the northern end of our trench ; and the sides could be seen sloping downwards from it at a gentle angle. At a depth of between 5 or 6 feet in the silt filling was a layer of black stuff, about a foot in thickness. This represented the middle of the circle-ditch. It yielded a shoulder-blade (5 feet 2 inches) and some small fragments of other animal-bones. In neither trench was the smallest fragment of pottery found ; so that we know no more about the date of the circles than we did before.

The dig, however, was by no means unproductive. It proved that under certain conditions, an old silted-up ditch may be revealed to the aeroplane-camera by horse-beans, even when such a ditch is blanketed by 2½ feet of stiff loam. The mechanism by which this is achieved remains to be determined ; perhaps capillary attraction causes moisture to rise through the more compact, though permeable, loam which fills the old circle-ditch. Since the bottom of this ditch penetrates, after a wet season, at least a foot beneath the water-table, it

cannot, even in the driest spell, be very far above it. The added moisture thus drawn up would be adequate to stimulate the crops immediately above the moist belt, and to cause that darker hue which appears on the vertical photograph. This effect of moisture is familiar and proven many times over ; but it was not suspected that it could act differentially through 2½ feet of compact, homogeneous material.

A word must be added about the circles themselves. They belong presumably to the class of sacred circles ; and are to be compared with those at Thornbrough and Hutton Moor in Yorkshire.

The same plate reveals also several other interesting features, all of them new and all invisible on the ground. There are two parallel dark lines 40 feet apart, suggesting a track between fields, possibly of prehistoric or Romano-British date. Such tracks on the downs are known to have been bounded by ditches—and the dark lines here plainly stand for narrow ditches—but the downland tracks are usually much less than 40 feet wide. Parallel with these are two other dark lines, also running parallel, and laid out straighter than the forgoing. They continued beyond the two roads and can be traced altogether for more than half a mile ; the alignment is almost but not quite straight. They appear again on plate II (lower view). The western line is interrupted by a small circle, probably representing the ditch round a barrow.

The same batch of photographs, taken at the same time, brought to light several other new and interesting features. Some of these are published on plate II and drawn in plan on pages 472 and 473. The upper view shows the large arable field between Bishop's Court, Dorchester, and the Thames, small portions of both of which are included. The rectangular enclosures revealed will strike the eye at once. They bear no relation to the existing field-divisions, and indeed they cut through the present field-road near its turning-point, where some straw-ricks stood when the photograph was taken. Double ditches of unequal size and 20 feet apart are again seen. The age and purpose of these markings is entirely unknown ; and there are no signs visible on the surface.

At A (the point where the northernmost line strikes the river) a semi-circular enclosure is visible, with a gap on the land-ward (eastern) portion. The line and the enclosure intersect at an obtuse angle, and plainly belong to different ages. One would imagine the enclosure to be the older, and to be prehistoric. A number of small dark spots may indicate pits.

Bishop's Court is described on the Ordnance Map as on the site of a bishop's 'palace'. Dorchester was a bishop's see between 874 and 1050 A.D.; and perhaps our rectangular markings are connected with this residence. They may equally well be either earlier or later.

The lower view represents part of the Minchin recreation ground, Dorchester (with a white square in the middle), and some allotments, both adjoining the Oxford road on the east.

The left hand portion shows the end of the parallel lines referred to above. Between them there is visible on the print a circle (B), of

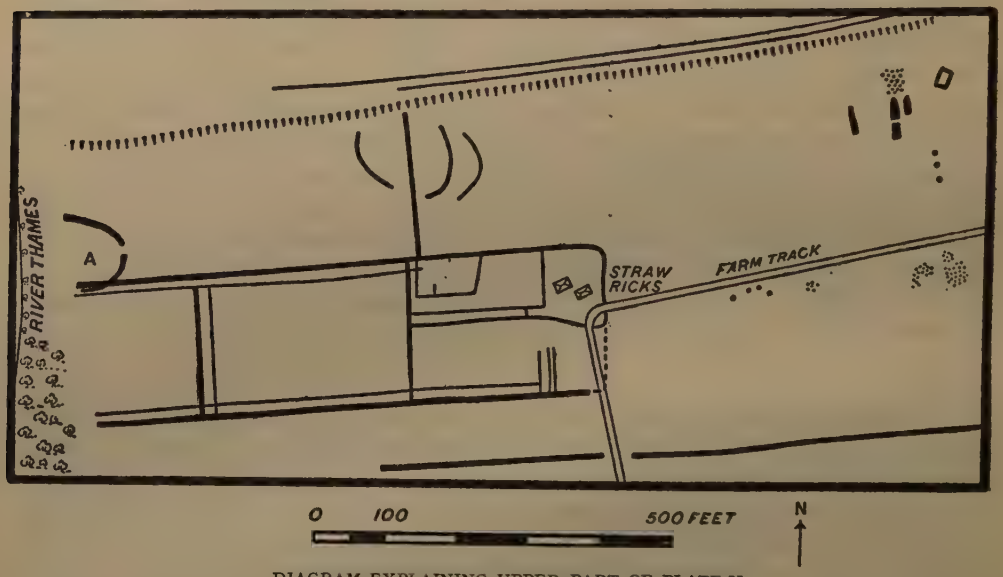
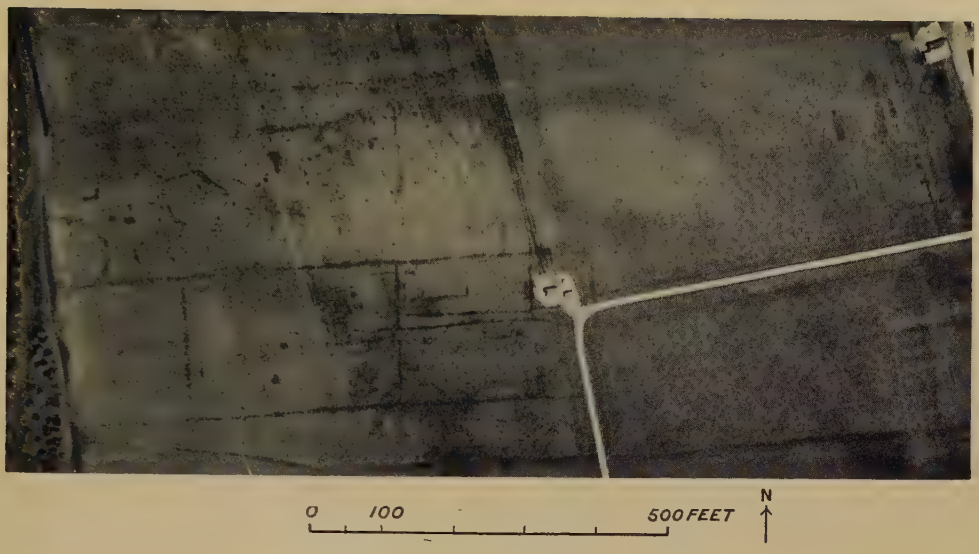


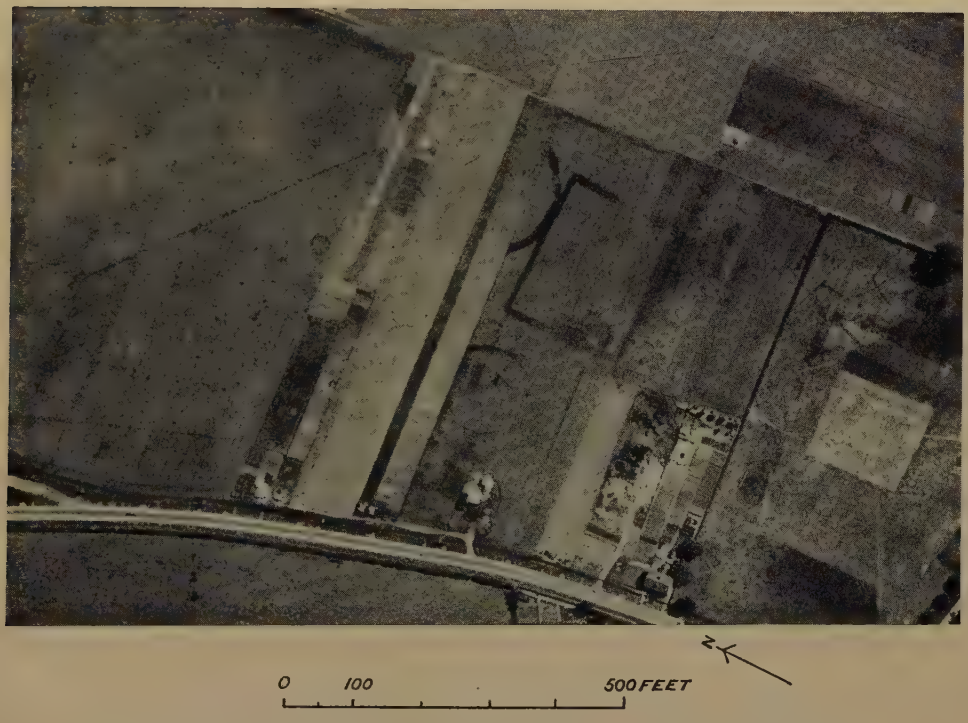
DIAGRAM EXPLAINING UPPER PART OF PLATE II

twelve minute black dots. This circle is small, but unmistakable; presumably the dots are holes and were filled by stone or timber uprights. The diameter is about 120 feet.

Further to the right is a dark band (CD), forming an arc of a circle. This is the only instance, in all these photographs, where there is something to see on the ground. The portion within the arc forms a large low mound, and is presumably the remains of a barrow which is being flattened by cultivation;—the arc representing the ditch—or such portion of it as was covered by a 'sympathetic' crop when the photograph was taken.

PLATE II





BISHOP'S COURT FARM (ABOVE) AND MINCHIN RECREATION GROUND (BELOW)
NEAR DORCHESTER, OXFORDSHIRE

Reproduced by permission of the Air Council and H.M. Stationery Office

facing p. 472

This arc touches one side of a rectangular enclosure (E) whose internal dimensions are 220 by 175 feet. An entrance-gap 50 feet wide faces east and falls in the middle of the eastern side.

Below (west of) this enclosure are fragmentary indications of two concentric ditches (F), the inner one being much the smaller. The diameter of the outer circle is 160 feet and of the inner 100 feet. This was evidently a barrow, perhaps a disc barrow.

Entering the photograph from the left-hand side can be seen a

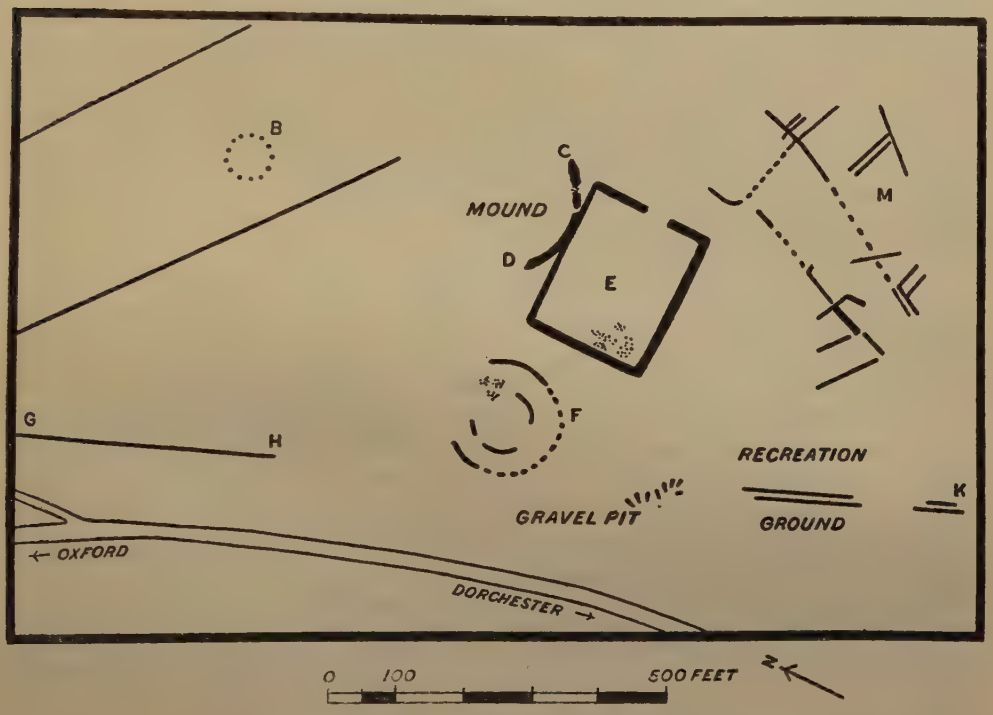


DIAGRAM EXPLAINING LOWER PART OF PLATE II

thin single dark line (GH). It is lost where it crosses the allotments ; but its alignment is continued in the recreation ground by *two* parallel lines (K), 10 feet apart. These are plainest on the print on the right of the bottom corner of the white square in the middle of the field.

Lastly, a number of indeterminate markings (M) can be seen in the top (NE) corner of the recreation ground, continuing beyond it into two adjacent fields.

It may be gathered from the above that the neighbourhood of Dorchester is rich in remains of every period. Such finds as have been made fully bear out this conclusion. A 'cushion mace-head' of stone was found on the north side of Dorchester. [It will be illustrated in a later number of ANTIQUITY. I wish to thank Mr E. Thurlow Leeds, F.S.A., the Assistant Keeper, for calling my attention to it]. A rich burial was found in the gravel-pit shown in the lower part of plate II. This was presented to the Pitt Rivers museum.[3] Roman and later remains are of course common in and around Dorchester itself, where there was a Romano-British village or small town. The mace-head is of a rare type ; examples have been found at Stonehenge (*Antiquaries Journal*, 1925, v, 33–5) and in a chambered long barrow at Tormore, Arran (*Proc. Soc. Ant. Scotl.* 1902, xxxvi, p. 100, fig. 23). Only eight British specimens have been recorded, five from Scotland and three from the Thames and its neighbourhood. The presence of one here so near the big circles, and probably close to the smaller burial-circles, is very suggestive.

All these air-photographs were taken probably in less than five minutes. Five seasons could well be spent in following up the results by excavation.

Sir John Russell, Director of the Rothamsted Experimental Station, states in a letter that, whereas the roots of barley do not penetrate deeply, 'beans form clearly defined tap-roots, penetrating to a depth of 40–43 inches. . . . This year the difference [visible on the photograph between the two crops] might easily be exaggerated by the circumstance that, over most parts of the country, there came a drought after the barley had been sown, so that the root-system probably never got well developed ; whilst for beans the roots had had time to grow and, during this dry spell, to exhaust the moisture from the subsoil.'

O. G. S. CRAWFORD

PREHISTORIC AGRICULTURE

Dr. Cecil Curwen's paper, published in our last number, has evidently been read with interest by many subscribers—to judge from the letters received. The following is extracted from a letter sent to

[3] I am indebted to Mr Kirby, of Dorchester, for this information. The gravel pit is on land which belonged to him when the find was made ; and it was through his agency that the objects were preserved.

the Editor by the Rev. E. H. Goddard, F.S.A., Hon. Secretary of the Wiltshire Archaeological Society:

'On page 272 [of no. 3], Pliny is quoted as saying that even in his day some mountain tribes still ' ploughed ' without oxen, using a sort of hoe. Pliny might have said the same today. Three years ago I saw a man at work on a small patch of potato-land, on an extremely steep, sunny, southern slope above Zermatt on the way to the glacier, probably 6000–7000 feet up. He was using a very short-handled hoe or mattock, with a blade as big as, and of the same shape as, an ordinary English navvy's shovel, *i.e.*, shield-shaped with pointed end, set on its short stout handle at a very acute angle. Standing below his work, he used, so far as I recollect, a curious sidelong stroke from right to left, so that the earth, when it left his hoe, remained on the same level and was not dragged down. This implement is, I think, always used round Zermatt and no doubt elsewhere in Switzerland for the cultivation of steep potato and rye patches on ground obviously impossible for the plough and almost equally impossible to use either spade or fork upon, without dragging all the soil down to the bottom of the slope.

'As regards stone hoes, I remember seeing, in the great Northesk collection, formerly at Winchester, two fine and beautifully made stone hoes, which were partly polished until they shone with a gloss almost if not quite equal to that on the flints, obviously in their case caused by the use of the hoe in sandy soil'.

UISNEACH

Professor R. A. S. Macalister contributes the following note :—

The Archaeological Exploration Committee of the Royal Irish Academy has for some time been engaged in the examination of the site of Uisneach, with the aid of a generous grant from the Percy Sladen Fund of the Linnaean Society. Uisneach is a low hill about 12 miles west of the town of Mullingar. It is crowned with a fortified enclosure, surrounded with a double line of rampart. The site was in ancient times a sanctuary, and the centre of important religious assemblies ; it also assumed a political importance when Tuathal Teachtmhar, king of Connaught about 150 A.D., crossed the Shannon, and, capturing the region in which it stands, here established the centre of his kingdom. The excavation has revealed some interesting foundations, especially the site of a large seven-roomed house, of which the complete plan has been recovered. A few objects found on the occupation-level indicate

a date in about the second century A.D. for this building, and the explorers consider themselves justified in believing that they have actually found the remains of the palace of king Tuathal. There are a number of difficulties still to be cleared up, and some further exploration is necessary, but it is hoped to publish through the Royal Irish Academy a full report upon this work in the course of next year. A short account by the same writer was published in the *Irish Independent* (Dublin), 21 September.

ROMAN FORT AT CARISBROOKE CASTLE

During recent work at Carisbrooke Castle, in the Isle of Wight, a most remarkable discovery was made—nothing less than a wall, older than the medieval ruins, and from its masonry clearly of Roman construction. The wall was hidden by the ramparts of the rectangular bailey ; and it is evident that the medieval builders adopted its outline and built upon it. It has been followed round the greater part of the bailey, but at present only the eastern side has been uncovered. There is an entrance in the middle of this side. The accompanying view[1] shows the foot of the castle mound on which the keep stands.

Practically no other Roman remains have been found at the Castle itself, though there is a well-known Roman villa in the village below, in the garden of the vicarage, and much Roman pottery is found in the modern cemetery a quarter of a mile to the east. Presumably the wall is that of a fourth century fort ; there seems to be no other explanation of its presence here. If so, it must have been a unit in the defensive system of the Saxon shore. The nearest other fort is Portchester Castle which, like all the rest—Pevensey, Lympne, Dover, Richborough, Reculver, Bradwell, Walton Castle, Burgh Castle and Brancaster—stood right on the coast. Carisbrooke Castle is, however, only a mile from the tidal point of the Medina estuary. Speculation is tempting ; was this fort the headquarters of a garrison to protect the villas of the island from sea-raiders ? At least half a dozen such villas are known to have existed in the island, and no doubt there were others, as yet undiscovered.

HARDKNOT CASTLE

At a recent meeting of the Cumberland and Westmorland

[1] Thanks are due to Mr J. T. Jackson for taking and supplying the photograph, and to Miss Morey for her kind offices in arranging for this to be done.

ROMAN WALL AT CARISBROOKE CASTLE
Ph. J. T. Jackson

facing p. 476

Archaeological Society, Mr R. G. Collingwood made the following remarks (which are quoted from the *Whitehaven News*, 22 September 1927) :—

'Tacitus tells us that Agricola placed troops along that part of the shore of Britain which faces Ireland, not so much through fear (of Irish raids) as with the intention of effecting a conquest of Ireland.

'Agricola certainly intended to conquer Ireland, just as he intended to conquer the whole of Scotland ; and Tacitus's phrase suggests that there was something to be afraid of—that the Irish sea-raiders who were such a terror to Britain in later years had already begun to be active in Agricola's time. In that case, in spite of Tacitus's protests, Agricola's fortification of the coast would be defensive as well as offensive.

'Somewhere in the west, therefore, Agricola fortified the coast and constructed a naval base for his projected invasion. Where did this massing of troops take place ? In Galloway ?—No, not Galloway, though some writers have suggested it ; because there are no Roman remains there. Was it along the Lancashire coast ?—No, because the Roman forts on that coast are placed too far inland to suit the purpose of naval bases.

'North Wales ?—There were ports on this coast, but they were not designed for either attack or defence by sea, but to keep in order the mountainous inland country. South Wales ?—There are no Roman remains on the coast except at Cardiff, which does not face Ireland.

'Devon or Cornwall ?—There is no evidence that there was any Roman occupation of these counties at this early date, at any rate on their north-western coasts.

'We are driven to the conclusion that Cumberland is the district referred to by Tacitus ; and it follows that Agricola's naval base was at Ravenglass, for Ravenglass is the only Cumberland harbour at which a Roman fort exists so placed as to command the harbour itself ; and, moreover, Ravenglass is the only Cumberland coastal fort which is connected by a direct road with Agricola's army base at Chester.

'But if the other theories are difficult to maintain, the naval base one appears to accord most satisfactorily with the facts of the case. But the naval base must be linked up with the general administration of the British province. Agricola's north-western headquarters were at Chester, and land communication must be maintained with Chester. The route across the sands of Morecambe Bay was unsuited to military needs, being open only at low tides, and interrupted by fords. The route via Ambleside and Kendal, though tedious and rough, was at

least a solid and fairly direct one. It diverged from the main road to Carlisle at Lancaster, and ran in three stages to Kendal, Ambleside (where relics of Agricolan times have been found) and Ravenglass. But the last stage was a long one, and if reinforcements were wanted at Ravenglass they could not quickly be got from Ambleside; therefore, if Hardknot was really built in 103, it must be regarded as an afterthought to the naval station and the road. It served three main purposes :—

(1) As a resting place for troops going out to Ravenglass or returning to Chester.

(2) As a signalling station with the port, which is in sight from it.

(3) As a secondary defensive work against sudden raids, and for moving up relief troops to Ravenglass as required.

'A great deal more work needs to be done at Ravenglass before the story of this place can be fully told, and there is scope for work at Kendal also, to help in piecing the story together ; but its accuracy in the main is confirmed by the fact that in the Antonine road-book of the Empire the tenth British "Iter", long a puzzle to antiquaries, was convincingly explained by Haverfield as going from Cheshire by Kendal to Ravenglass. Now why should an insignificant mountain trail like this figure in the Itineraries as a main road ? No explanation has hitherto been offered ; but all is clear if the Kendal-Ravenglass road was originally Agricola's strategic road to Ireland.'

A drawing of Hardknot Castle as it must have looked in Roman times appears in Mr. Collingwood's book on *Roman Britain* (Oxford, 1923. 2s 6d).

FAWLER, AS PLACE-NAME

One of the most interesting Berkshire place-names is that of Fawler, a hamlet in Kingston Lisle, about $4\frac{1}{2}$ miles west of Wantage, in the Vale of the White Horse. The early form of the name is given by Dr Grundy (Berkshire Charters : *Berks. Arch. Jour.*, xxxi, pt. 1) in a quotation from the Abingdon Cartulary, temp. Henry I :— 'Esperesholt [Sparsholt, near Kingston Lisle] quae et alio nomine vocatur *Flagaflora* '. This is a miswriting for *Fagaflora*='coloured or spotted floor'.

In the case of the village of Fawler in Oxfordshire, which has much the same early forms as the Berkshire example (*e.g.* Fauflor in 1205) the ' coloured floor ' has been identified as the mosaic pavement of a Roman villa ; a Roman villa with a tesselated pavement being found near the village. (See Introduction, Survey of English Place-names, ch. viii).

In the Berkshire example there is no record of any such pavement having been discovered, but judging by analogy there should be one somewhere in the vicinity. Support is given to this by the fact that the only barrow in the immediate neighbourhood of Fawler, (in a field opposite the Kingston Lisle cemetery, above Kingston Common), is of definitely Romano-British type : a bowl-shaped mound with remains of a surrounding bank.

Our evidence, then, for the existence of a Roman villa at Fawler is somewhat scanty : indeed up to the present direct archaeological evidence is completely absent. No surface evidence of a villa, such as pottery, tiles, etc., has been found in the fields around the village (or if found it has not been recorded). We have, however, this most important place-name clue, which is a distinct pointer to a villa ; and the fact that the barrow is Romano-British in form helps to support the inference that there are further Roman remains, *e.g.*, a villa with a ' faga flore,' somewhere near Fawler. Although we cannot at present say definitely that such exists, we might almost go so far as to predict that it will one day be found. STUART PIGGOTT

RECENT WORK IN CRETE

'After eleven months' hard work', writes Professor Halbherr, (in *The Illustrated London News*, 1 October) ' under the direction of Professor Xanthoudides, the repairs to the Museum of Candia have been completed, and the famous masterpieces of Minoan art, for the fate of which the archaeological world was so anxious last year, are now to be seen in almost the same conditions as they were before the great earthquake of 26 June 1926. Even the goddess fresco from Haghia Triada, which was thrown in minute pieces to the ground and believed to be hopelessly lost, has been refitted, leaving very few gaps. The Cnossian collection of Sir Arthur Evans, save one of the most elegant painted reliefs and some fragments of minor importance, is again *au complet*, and waits only for the addition of the latest discoveries from the Palace

and the Necropolis. With the reopening of the Museum, archaeological work has also been resumed, chiefly at Cnossos by Dr Mackenzie and the British School of Athens, and at Gortyna by the Italian Mission. In the latter place, the excavations of the Roman praetorium were continued. The Palace of the Proconsul, or Governor of Crete and Cyrene, was shown to have been one of the biggest and most luxurious residences of any provincial magistrate in the East. It was flanked by a splendid portico of Corinthian marble columns, three feet in diameter, and provided with every comfort. The Italian Mission is now planning the complete excavation of this quarter, which, according to ancient writers, was the heart of the city, extending from the Thermae, on one side, to the smaller Theatre and the Isaeum on the other. Signor Mussolini, the only one among foreign statesmen who, after the earthquake, helped the reconstruction of the world-famed Museum of Candia, has assigned to the purpose a grant of 100,000 drachmas, and is showing the deepest interest in the new archaeological survey of Crete'.

ARCHAEOLOGY IN CEYLON

It is good news that Mr Hocart, the Archaeological Commissioner for Ceylon, is tackling the problem of the island's prehistory. Practically nothing is known of the artefacts of the earlier periods, owing to the fact that no scientific excavations have been undertaken there. ' What is wanted ' says Mr Hocart, ' is, first of all, stratified sites, because there alone can we establish chronology. Stratified sites are not common in Ceylon owing to the shallowness of the soil, the washaways, and, above all, the habit of building on rock. Manta [where large-scale excavations have been undertaken] is one of the few ; but it is an exceptionally good one, however, for there was at least 9 feet of débris, and may be a great deal more'. Surface work during 1926 revealed pottery, beads and coins of the 13th and 14th centuries A.D. 'The excavations have further been very much complicated by previous so-called excavations, which consisted in digging holes, and throwing up the earth on the side. We had to spend a fair amount on removing the débris before we could do any work. The stuff coming from these spoil mounds is more interesting than that coming from our excavations, but is useless since its original position is not known'. (*Art and Archaeology*, October 1927, xxiv, 142).

MAP-REVISION BY AIR-PHOTOGRAPHY

Readers of ANTIQUITY will be interested to hear the result of a recent experiment carried out by the Ordnance Survey. The following is extracted from the Annual Report for 1926-7, but the matter has been more fully dealt with in a special report obtainable from H.M. Stationery Office (*Report on the experimental revision of the* $\frac{1}{2500}$ *Ordnance Survey Plans with the aid of photographs taken from the Air*, 14 pages, price 4d.):—

'Photography from the air for survey purposes has made considerable advances of recent years, but there has been much doubt as to how far the method was applicable to the revision of Ordnance Survey large-scale maps; bearing in mind that besides the need for accuracy in the topographical detail, the Ordnance Survey has to go into the questions of names, administrative boundaries and other matters. It was decided that the only way to get reliable information on the subject was to put the method to a practical test, by revising a substantial area by the normal Ordnance Survey methods and at the same time to revise it independently, using air photographs, and to compare the results in respect of their accuracy, speed, and cost. Sanction was obtained for the necessary expenditure, and the experiment was carried out in an area near Eastbourne. A report on this experiment is being published. It is only necessary here to state that the result showed conclusively that air photographs are sufficiently accurate for large-scale revision, and that their use saves a considerable amount of time on the ground. At present, however, mainly owing to inexperience of the staff, the method cannot be compared economically with the normal methods. Further experiment, extending over a period of years, is required, and arrangements are being made to this end'.

THE DEVIL'S ARROWS

We are asked to publish the following correction:—

'At the recent meeting of the British Association at Leeds, excursions handbook Q was issued for members taking part in excursion no. 18 to Aldborough and the "Devil's Arrows". On pages 16 and 17 of this handbook there are remarks on this monument, and a plan of the positions of the three megaliths of which it is formed, for which the undersigned are responsible.

'It is now found that the measurements and azimuths on which the plan was plotted are inaccurate, and that the positions of the three stones do not, as there shown, fall on the arc of a circle. The theory derived from this supposition, namely that the three stones originally formed part either of a great Stone Circle, or were the remains of the peristalith of a tumulus, must therefore be abandoned.

'The 25-inch Ordnance Survey map of the site shows that the three stones are actually almost in alignment. From the northern monolith the azimuths of the other two lie between 151° 00′ and 152° 30′, approximately, while the distance from the northern stone to the middle one is 200 feet, and from the northern to the southernmost is 570 feet (also approximately)'.

BOYLE SOMERVILLE,
Vice-Admiral

HERBERT E. WROOT.

UR OF THE CHALDEES

As we go to press Mr Woolley's first letter appears in *The Times* (15 November). We now learn that the celebrated 'dagger grave'—the richest of all—had to be left unfinished last year, through lack of funds. The excavation has been resumed. 'A large and heavy gold tassel bead . . . is the finest individual object as yet; besides this there are hundreds of gold beads and pendants, gold and silver ear-rings, masses of beads in carnelian and lapis lazuli, and a number of small shell plaques engraved with animal scenes or inlaid with geometrical patterns, probably belonging to some such object as the gaming board found last year. These things are all lying in confusion, having apparently been flung into the shaft of the grave as it was being filled up with earth. Even now we have not reached the grave level proper, and may at any moment light upon something more important than anything yet discovered'.

Recent Events

The Editor is not always able to verify information taken from the daily press and other sources and cannot therefore assume responsibility for it.

Excavations are in progress at Ephesus under the direction of Professor Keil of Vienna. It is proposed to excavate the Cave of the Seven Sleepers and some catacombs. (*Le XXe Siècle*, Brussels, 19 September).

Emergency excavations were carried out within the Roman settlement of Manduessedum, in the garden of the Bull Inn, Witherley, where a garage was being built. The area dug was 36 by 106 feet and over seven hundredweight of Roman pottery (including Samian) was found, but no trace of walls. The work was supervised by Messrs. P. B. Chatwin and Bryan H. St. J. O'Neil, and a report will be published in the proceedings of the Birmingham Archaeological Society (probably to appear in January 1929).

The excavation of the Meare Lake village was continued by the Somersetshire Archaeological Society, under the direction of Dr Bulleid and Mr H. St. George Gray. The settlement seems to be perhaps a couple of generations older than the similar village at Glastonbury. Saddle-querns predominate, whereas at Glastonbury rotary querns were more common.

The Greek Archaeological Society is to undertake excavations in the island of Leucas, now called Santa Maura. Leucas is a claimant for the honour of having been the home of Odysseus, but readers of Mr Shewan's paper (pp. 402–11) and of Sir Rennell Rodd's book (to be reviewed, we hope, in our next number) will be in a position to form their own views on this debatable point.

Mr Ralegh Radford, Secretary of the Earthworks Committee, has called attention to the discovery of a dug-out canoe in Mount's Bay, near Penzance, associated with what was said to be a Roman coin. The find is recorded in the *Journal* of the Royal Institution of Cornwall, 1871–3, iv, p. lxxxvii. This may have some bearing on the date of the final submergence of 'Lyonesse'; but one could have wished that more precise details had been recorded at the time.

A Roman cemetery of the first century B.C. is said to have been discovered outside the walls of Cadiz. The finds include cinerary urns and a 'sarcophagus' containing the skeleton of a woman. (*The Times*, 7 September).

A German expedition has been excavating on the island of Aegina and has found a stratified settlement going back to the third millennium. (*Le Gaulois*, 22 August).

The important excavations carried out by the Germans on the site of Babylon have never been published. That was an inevitable result of the war. The cases containing the finds were, however, stored at Bagdad and most fortunately survived unharmed through all the vicissitudes of the last decade. Through the good offices of the late Miss Gertrude Bell, to whom archaeology owes so much, they were recently sent to Berlin and publication is being carried out by the Deutsche Orient Gesellschaft.

The Bodleian Library in 1924 acquired some of the manuscripts of William Stukeley, the 18th century antiquary (1687–1765). Some were presented by Mr R. St. J. Vavasour, and the remainder were bought at a sale. An account of them was published in the *Bodleian Quarterly Record*, October 1924, no. 43, pp. 149, 150.

As a result of excavations it is reported that frescoes have been found in a Mycenaean palace at Thebes in Greece. (*The Times*, 27 August).

Excavations have been made at Eston Nab, a hill-fort about five miles east of Middlesborough, Yorkshire (N.R.), under the direction of Mr Frank Elgee, of the Dorman Memorial Museum, Middlesborough. In the absence of pottery, except in association with a cremation, it would be premature to attempt to date the construction of the camp. (*North Eastern Daily Gazette*, Middlesborough, 30 September).

The Italian School of Archaeology at Athens has been excavating at Castro, in the island of Lemnos. Tombs containing geometric and classical pottery have been found ; also the clay model of a house and a gold necklace. (*The Times*, 3 October).

A rock struck by lightning fell on the road between Visrelles and Chimay in Belgium, revealing a large Frankish cemetery. The existence of this cemetery appears already to have been known, but the method of its exposure must surely be unique !

Prof. Gordon Childe gave his inaugural lecture, as the first occupant of the Abercromby Chair of Prehistoric Archaeology, at Edinburgh on 12 October 1927. He took as his subject ' Lord Abercromby's account of the first advent of metallurgists to Great Britain in the light of recent research '—in other words, the invasion of ' beaker ' peoples. (*Glasgow Herald*, and *Scotsman*, 13 October).

An article on ' Stone Age man in Kenya Colony ' by L. S. B. Leaky is published in *Nature*, 16 July, pp. 85–6.

A chariot-wheel, claimed to be Roman or a little earlier, has been found by Mr T. Russell Goddard, Curator of the Hancock Museum, Newcastle. It was lying ' in the river bank at Ryton '; and to judge from the photograph published, seems in excellent preservation. The hub is perfect, and there are eight spokes.

Mr John Mathieson has recently returned from St. Kilda, where he has been during the summer making a large-scale map of the island. Although one of the British Islands, no large-scale Ordnance Map of it exists. We hope to print a note on the antiquities from Mr Mathieson's own pen.

Professor P. F. Kendall writes to say that querns of Niedermendig lava have been found both at Kirkstall Abbey and Rievaulx Abbey. This seems to prove that ' the merits of the stone were recognized in medieval England ', as well as during the Romano-British period. If this proves correct, the discovery of these querns or portions of them—the material of which is so easy to recognize at sight—will no longer be evidence of the Romans.

In connexion with the last item it may be mentioned that even the ' typically Roman ' flanged roof-tiles seem to have been made in medieval times. There is one in the Taunton Museum from Castle Neroche, Somerset, a site that was excavated by Mr H. St. George Gray and yielded nothing whatever of Roman date.

Mr Firth's excavations round the Pyramids of Sakkara, usually called the Step Pyramids, promise to produce great results. They are being carried out by Mr Firth in his official capacity as head of the Department of Antiquities. (*The Times*, 9 November).

Forthcoming Excavations

THE FAYUM

We are authorized to publish the following extract from a letter received from Professor Boak, Professor of Ancient History in the University of Michigan. (Pending the appointment of a successor to the late Professor Kelsey, his work as Director of Near East Research Expeditions is being carried on by a Committee).

'A University of Michigan Expedition began work at Karanis (modern Kôm Aushim) in the Fayum during the season 1924–5, and has continued to excavate there each succeeding winter, so that we have now completed three years' work. The results of the first year's work were summed up by myself in the Journal of Egyptian Archaeology, as I helped to start the dig and spent the first winter on the ground. Since then no summaries have been published.

'This excavation will be continued for the following year under the field-direction of Prof. E. E. Peterson who has been in charge during the past season.

'The object of the work is not merely the discovery of papyri, but the systematic excavation of a Graeco-Roman town site in Egypt, with the object of throwing all possible light upon the social and economic history of the country during the Hellenistic-Roman period'.

Recent Museum Accessions

SCOTTISH MUSEUM, EDINBURGH

The following is a list of recent additions to the Scottish National Museum of Antiquities :—

A collection of microlithic implements (Tardenoisian) from Dryburgh, Berwickshire.

Two cinerary urns from a Bronze Age cemetery at Seamill, Ayrshire.

Cinerary urn from West Kilbride, Ayrshire.

Hoard of early Iron Age implements and ornaments, found in 1883 at Wooden, Eckford, Roxburghshire, including a bronze cheek-piece for a bridle, beautifully enamelled in red, a bronze terret-ring, two hammers, an axe, an adze, a peg-anvil, a chisel and other objects.

Stone ball with four bosses, three of which are elaborately carved, from Lumphanan, Aberdeenshire.

Stone ball with eight bosses, of unusual shape, from Ardkeeling, Morayshire.

Stone Ball with four large and three small bosses, from Huntly, Aberdeenshire.

Slab, ornamented on one edge, with designs resembling those on beaker pottery, found near short cists at Stenness, Orkney.

Small slab bearing tree runes, found near Stenness, Orkney.

Fragment of a stone slab, ornamented on one side with curvilinear designs, possibly part of a symbol stone, from Jarlshof, Shetland.

DORCHESTER

Captain J. E. Acland, Curator of the Dorset County Museum, reports the following recent acquisitions:—

Two Greek bronze coins from Samos, found in a cottage garden at Charminster, two miles from Dorchester. About a mile to the north was a Roman villa. They were examined by Mr Henry Symonds, F.S.A., who attributes them to the first century B.C. and to about the year 225 A.D. respectively. He says :—' It is really extraordinary that two Greek coins from the same island, but 300 years apart in date, should turn up near Dorchester. But I regard an allotment garden as a dubious provenance '.

Bowl-shaped, ornamented food-vessel ; handled beaker ; two bucket-shaped urns ; all from a round barrow of the Bronze Age, opened September 1922, situated 200 yards east of the Dorchester-Weymouth road, on the summit of Ridgeway Hill. See ' Early Bronze Age Beaker-pottery', by Dr Cyril Fox, *Arch. Cambrensis*, June 1925.

Ivory object of the 13th century found at Milborne St. Andrew, 8 miles from Dorchester. See *Antiquaries Journ.*, July 1924. Silver Roman spoons ; bowls engraved with a fish and with the words ' Augustine Vivas ' (regarded as Christian), found in Dorchester with a hoard of Roman coins, 360-400 A.D., about 1898 but acquired by the Museum in 1920. See *Antiquaries Journ.*, April 1922.

NORWICH

The following are amongst the additions of recent years to the Castle Museum:—

The J. J. Colman collection of Egyptian antiquities, catalogued and described by J. E. Quibell of Cairo museum (1921) ; H. H. Halls collection of flint implements from local sites (1924) ; Sir H. Rider Haggard's collection of Egyptian antiquities (1925) ; W. G. Clarke's collection of flint implements from local sites (1926).

An important feature of the prehistoric section is a large wall-case

arranged as an introduction to the study of early Man, the aim of which is to put before the visitor in a condensed form the salient facts bearing on the question of Man's progress, as evidenced by his physical remains, contemporary environment and handicrafts. The case is divided roughly into four sections dealing respectively with the ' pre-palaeolithic ', palaeolithic, neolithic and bronze ages. Under each division are shown illustrations of animals associated with Man at that particular phase of time, accompanied by descriptions of their characteristics ; casts of the crania of early human types, together with diagrams and photographs of discovery sites, burial chambers and megaliths ; and, finally, stone implements, carvings on bone, pottery, and bronze artefacts, peculiar to the several epochs. A series of table cases below contain exhibits illustrating the technique of flint-flaking, the subject of patination, and the manufacture of bronze weapons and ornaments.

The Strangers' Hall Folk Museum presented to Norwich by Mr Leonard G. Bolingbroke, was formally opened to the public in July 1923. The house and collections illustrate the evolution of domestic life according to the tastes and needs of the citizens of Norwich, from the fourteenth to the eighteenth century.

The Bridewell museum of local industries presented to the City by Mr H. N. Holmes, was opened in October 1925. The collections represent the past history and present condition of the industries of Norwich and district, *e.g.*, textiles, boots and shoes, agriculture, engineering, printing, etc. The Bridewell buildings incorporate the magnificent flint-faced wall and crypts of the house of the first Mayor (1403) of Norwich—William Appleyard.

Reviews

UR EXCAVATIONS. Volume I: AL 'UBAID, a Report on the work carried out at Al 'Ubaid for the British Museum in 1919, and for the Joint Expedition in 1922–3*. By H. R. HALL and C. LEONARD WOOLLEY, with chapters by C. J. GADD and Prof. Sir ARTHUR KEITH. Oxford University Press. 1927. 63s. 244 pages and 68 plates.

This magnificent report describes the first excavations conducted in Iraq on a large scale since the conclusion of the war.

The site lies four miles to the west of Ur and a little over a hundred miles west by north of Basrah. It was discovered by Dr Hall in April 1919 and the first excavations were those which he did there himself. He was rewarded by the discovery of a remarkable copper relief of Im-dugud and other remains of the temple frieze. Such a site obviously could not be neglected when a fully equipped expedition subsequently established itself near by.

The main feature of the site is the platform of the temple of Nin-khursag, built by A-anni-padda, the second king of the First Dynasty of Ur. This fact is recorded on the foundation-tablet which was most fortunately recovered by Mr Woolley. Before this discovery it had been uncertain whether this First Dynasty really existed or was merely legendary. According to Mr Gadd (p. 140) 'A-anni-padda cannot possibly be earlier than 3100 B.C., at the very earliest, and is probably to be dated somewhat later'. The temple would then have been built not long before 3000 B.C., and the sculptured reliefs, the mosaic columns, the limestone inlays and the 'flowers' all belong to this period. The bulk of these objects were found piled up at the base of the platform where they had fallen when the temple was destroyed, perhaps (Mr Gadd suggests, p. 139) by Eannatum of Lagash about 2950 B.C. They lay scattered on either side of the ramp; and by skilful detective-work Mr Woolley deduced their probable arrangement on the platform front. The result is a fine piece of imaginative reconstruction, reproduced in colour (plate 38).

As examples of the art of this distant epoch, the limestone inlays are of the utmost interest. The famous milking-scene (which had inevitably to remain in Bagdad) is full of primitive vigour. The copper bulls and the stag of the Im-dugud relief are rather clumsy and the whole design is awkward. It represents a primitive attempt to combine several figures into a single tableau, with a failure to master the principles of composition. That is characteristic of all archaic styles. Mr Woolley rightly emphasizes the purely decorative character of the brick panelling of the sides of the platform; it can have served no structural purpose, and is plainly intended to mitigate the flatness of an unbroken surface. He suggests, however, that the prototype is to be found in wooden

* This is a misprint for '1923-4'. During 1922-3 the Joint Expedition did its first season's digging at Ur. The work at Al 'Ubaid was carried out during the *second* season's work at Ur, as a subsidiary undertaking.

panelling which, to judge from carved designs, occurred in houses and is to be found still in use today. Recessing of a more elaborate kind is found in the brick mastabas at Tarkhan in Egypt. (Petrie, *Tarkhan*).

The inscriptions are dealt with in a special chapter by Mr C. J. Gadd, of the British Museum. All of them ' may confidently be ascribed to the First Dynasty of Ur, and to an extent of time which may not exceed some fifty years ' (p. 133). He shows that several independent tests give consistent results. His conclusions are of the first importance for the absolute chronology of Sumeria. If correct, and there seems no loop-hole of escape, it follows that many of the dynasties mentioned in the king-lists—which are the basis of all chronological systems—were not successive but contemporary. That would be natural in a land of city-states, sometimes independent, sometimes dominated by one or another more powerful ruler. That they were contemporary is now believed by most scholars.

Not far from the temple is a low mound with the remains of a prehistoric settlement and a cemetery. The settlement was inhabited by people who made the famous painted pottery, though Mr Woolley's excavations here have proved, as might be expected, that they also used other unpainted wares. This painted pottery was first found in Sumeria by Mr R. Campbell Thompson at Abu Shahrain in 1918. It is found also in Elam, at Susa and Musyan, and at Bander Bushire on the Persian Gulf. It seems to be characteristic of a mountain zone extending from the borders of India to Asia Minor and even possibly further west. It is now known to be associated with the earliest pictographic Sumerian writing (at Kish) ; but it is certainly earlier in date than the First Dynasty of Ur. The villagers at Al 'Ubaid, who used it, were agriculturists who also kept pigs, ate fish, lived in reed and mud-plastered huts, and may have had copper implements (though none were found). Mr Woolley's description tells us practically all that is known about them (pp. 149–51). They lived of course before the temple was built—probably several centuries before.

The cemetery belongs to two periods. The earliest graves found contained painted pottery, but only two can definitely be attributed to this period. It is practically certain that the whole ' cemetery ' area once contained graves of the painted pottery period, of which these two are the sole survivors—all the others having been destroyed by the grave-diggers of the later period. Of these later graves about a hundred were found. They contained no painted pots, though broken fragments were abundant, doubtless the destroyed remains from the earlier graves. The date of these later graves is difficult to establish, but at least two are assigned by Mr Woolley to the First Dynasty. The graves are divided by him into three groups—early, middle and late ; and he claims to have established ' a basis for the chronology of early Sumerian vase-forms which will be of permanent use ' (p. 188). The graves of all these three groups fall within the first two dynasties of the third millennium.

We keep harping upon the date of these graves because until their chronological limits are fixed their meaning and implications remain obscure. Unfortunately Sir Arthur Keith's account of the skeletons is marred by a glaring chronological error. He states at the outset (p. 214) that Mr Woolley ' assigns this group [from Al 'Ubaid] to a date about the beginning of the fourth millennium B.C. or earlier '. Mr Woolley does nothing of the kind—in this book at any rate—as readers of the preceding paragraph will have learnt. No graves are assigned to an earlier date than the First Dynasty (about 3000 or 3100 B.C.), except the two (C.8 and C.9) which contained painted pottery ; and of these two one contained ' no trace of a body ' and the other ' only a few fragments of

decayed bone ' (p. 190). They fall, therefore, outside the scope of Sir Arthur's report. If Sir Arthur is relying upon some earlier estimate of Mr Woolley's, we must blame the editor of the whole book for allowing a very confusing inconsistency to mar it. (We are not told who *is* the editor ; but a work like this, by several different people, must surely have been edited as a whole).

The most startling fact that emerges from Sir Arthur Keith's report is that the Sumerians were a long-headed people ! Previously it had been supposed, from the evidence of their statuary, that they were short (or round) headed. Monsieur Boule even went so far as to classify them, with a query, as Alpines (*Les hommes fossiles*, 1923, p. 350). But statues, even portrait-heads, are utterly unsuited for anthropological measurements. The present writer once compared an alabaster portrait-head from one of the mastabas at Gizah with the skull of the woman it represented. (He was present when both were discovered in the same tomb). There was no relation between their respective head-measurements, though the alabaster head gave one the impression of being a powerful and striking representation of the dead woman. We conclude by quoting Sir Arthur's summary (p. 240):—

' The Southern Mesopotamians . . . had big, long and narrow heads ; their affinities were with the peoples of the Caucasian or European type, and we may regard south-western Asia as their cradle-land [for the present]. They were akin to the predynastic people of Egypt described by Dr Fouquet, but differed from all other predynastic and dynastic Egyptians. The neolithic people of English long barrows were also related to them—perhaps distantly ; the Sumerian type made its appearance in Europe in palaeolithic times, for one of the earliest of Aurignacian skulls—that found at Combe Capelle in the Dordogne, France—is near akin to the ancient Arab type '.

We shall look forward to succeeding volumes of the series, hoping that they will provide as full a record as the present one. The opinion, expressed by a reviewer in a contemporary, that this book ' should have been compressed to a smaller compass ' [sic] may be set aside. We want the whole story, not ' snippets' ; and we are given it here.

MONEY AND MONETARY POLICY IN EARLY TIMES. By A. R. Burns, B.Sc. (Econ.). With sixteen plates, one map, and four figures in the text. Kegan Paul, Trench, Trubner and Co., Ltd., 1927. 531 pages. Price 25s. (The History of Civilisation. Edited by C. K. Ogden).

The author in his preface describes his critical examination of the speculations of numismatists and others as a helpful and friendly gesture from economics to archaeology and numismatics. We are certain that the gesture will be welcomed in the same friendly spirit in which it is made. Numismatists, in particular, will be only too grateful for expert assistance on these economic problems which they have usually to attack without specialist training.

The book may be said to consist of two fairly distinct parts—chapters I–XII in which the field of ancient coinage (*i.e.*, mainly Greece and Rome, but with reference also to the great Eastern monarchies and even to China), in its first thousand years of development, is brought under survey, and such questions as the origin of the coin, the prerogative of issue, types, metals, weights, denominations, token coinage, are one by one discussed ; and chapters XIII–XIV in which monetary policy as a whole is considered under four main chronological headings—the early Asiatic monarchies, Macedon and Egypt, the Greek world, the Roman Republic, and the Roman Empire.

It is to this second section of the book that the student will turn with particular interest, though the first section is, no doubt, essential for the general reader, who cannot be expected to bring a detailed knowledge of coinage with him. Mr Burns is, of course, compelled to rely mainly on specialists for his facts, but he has shown good judgment in his choice of guides, and good sense and fairness in his criticism of them. If it is sometimes hard to see the wood for the trees, Mr Burns is hardly to blame. To criticize this section severely would be a thankless and difficult task: but occasional signs are not wanting (*e.g.* the use of *as* throughout where *aes* is meant) that Mr Burns has not always quite understood his authorities and might have done wisely to get a specialist to read his proofs.

A few points of detail may be noted. In chapter I the author very wisely declines to accept Laum's theory of the religious origin of all coinage. In general he is reasonably sceptical of all theories that stretch too far beyond our exact knowledge. The early Aeginetan 'tortoises' are rightly associated with Pheidon. Mr Burns has a kindness for Professor Ure's theory that the Greek tyrants were very closely associated with the development of coinage, but he should perhaps indicate that definite proof of the theory is very hard to find. On the subject of types he steers a skilful course between extreme theories of 'sacred' or of 'economic' origin.

In the sections on Roman coinage a few inaccuracies may be cited. The device of *serration* was not applied to all denarii in 92 B.C. (p. 58): the date must be 118 B.C. Aurelian's new mints after his reform were not *senatorial* ones (p. 72). Whether the senate actually recovered its power of issuing gold and silver under Nero (p. 102) is very doubtful: the formula, EX S·C·, on Nero's early coins probably represents a compromise between emperor and senate. It is unproved—and improbable—that all ancient Greek tetradrachms, irrespective of weight, were tariffed at 3 *denarii* in Asia Minor, and at 4 *denarii* in Syria (p. 104, n.4). Not all the token coins of Augustus after the first few years bore his head on the obverse (p. 131). The statement that 'the types of the Imperial coinage have not the same interest as those of the Republic' (p. 131) will astonish most Roman students. The Republican types are undoubtedly very varied and attractive. But for serious interest they cannot yet compare with the imperial. Most of what we know of them concerns the curious, but historically more or less, irrelevant history of famous Roman 'gentes'; of their reference to contemporary history we know sadly little as yet. The statement that Augustus sent base *denarii* to India has no basis in fact (p. 166). But these are but minor blemishes on a piece of very sound work, and even here Mr Burns can often shift the blame on to his authorities.

In turning to the second section of the book, we exchange one set of difficulties for another. Our trouble now is not so much a plethora of facts, as an absence of any kind of evidence—on many points on which we require information. The coins, though faithful witnesses, are dumb, and, in the loss of all ordinances governing their use, we cannot always determine what their issue implies. These inevitable difficulties Mr Burns has encountered with courage and good success; and he has succeeded in drawing some general conclusions of definite value.

In chapter XIII we may endorse the general conclusion that the early empires used coinage mainly to assist trade and maintain prestige, not to make profit out of its manipulation: the Lydian monarchy with its electrum of declining quality may be an exception to the rule. In chapter XIV the Greek states are credited with great rectitude in monetary policy: perhaps the evidence against this view, though quoted, is not appraised at quite its true value. On the vexed question of early Athenian monetary

policy, it is clear, that, even after Mr Seltman's stimulating study, we are still some way from general agreement on the facts and their interpretation.

In chapter XV (the Roman Republic), Mr Burns sees quite rightly that the question 'What was the unit of account?' is vital to our understanding of early Republican policy. But he has not emancipated himself here from old theories that bear little relation to the facts. It is simply not true that after 268 B.C. the common unit of account was the *sestertius*. Livy shows us a reckoning in *asses*, which are not always liberal *asses*, but decline with the fall of the *as* coin. The sestertius reckoning only begins to come in from the time of the second Punic War. The earliest evidence of it is seen in the marks of value, 60, 40, 20 (sestertii) on emergency gold coins of 217 (not 241): the recorded later date must be preferred to the conjectural earlier one. Despite this initial handicap, Mr Burns writes very sanely on the reductions of the *as*. He condemns the view that a rise in the price of bronze can have had any large influence in the matter and points out that the reductions were made in time of war—when dire needs, not mere convenient adjustments, were at stake. The question of the marks of value, X, XVI and *, on the *denarius* naturally puzzles Mr. Burns, as it has puzzled every commentator up to date. Is it not probable that Pliny's statement that, after the change of value of the *denarius* to 16 asses, 'ten asses were always given for the *denarius* in the soldiers' pay', implies distinct values for the *denarius* in Rome and abroad, and that this duality of values took long to adjust and is reflected in the changing marks of value? On the semuncial reduction and the monetary policy pursued in and after the Social War, Mr Burns is not very satisfactory. The issue of plated coins certainly began not in 91 B.C., but in 122 B.C. Hence the silver, to which the *as* of half-an-ounce was related, was already seriously debased, and we cannot easily draw conclusions about the relative values of silver and copper. The semuncial reduction was a war measure, aiming primarily at the relief of the state from debt; it probably implied a reduction of all existing debts by a half. The desperate case of the state finances, due far more to the Social War, than even to the revolt of Asia under Mithradates, can be judged by the direct repudiation of 75 per cent. of all existing debts by the Lex Valeria in the year 86 B.C.

In chapter XV (the Roman Empire) the theory that Augustus tried to build up a trimetallic system on gold, silver and orichalcum is rejected, after sound criticism. On p. 412, n.3 an inaccuracy of reasoning in the explanation of the reform of Nero in the British Museum catalogue is rightly exposed. In view of the general character of Nero's later government it is idle to deny that the motive for debasing the silver was mainly immediate profit. The statement that 'it is less likely that the reduced weight of the *aureus* was fixed by law' (p. 415) is unfortunate. Such heavier *aurei* as were struck after Nero were struck within definite limits of time and place and represent deliberate attempts to return to the old standard. On p. 419 a curious misstatement has crept in; Domitian never committed the indiscretion of entitling himself 'Dominus et Deus' on his coins. On the later debasement of the denarius and the distresses of the third century Mr Burns writes lucidly and well. The account given of the reforms of Aurelian and Diocletian and of the later period cannot be regarded as fully satisfying; but a really effective commentary is hardly possible until numismatists have done their duty by clearing the darkness that still enwraps much of the coinage.

This is perhaps the right note on which to end the review. Mr Burns has rendered a great service to students by formulating questions and indicating defects in our knowledge, no less than by drawing many general conclusions which can be accepted as

reliable. For its fruitfulness in suggestion of new lines of research Mr Burns's book deserves our special gratitude. The general reader will find a clear and well-planned account of a subject that goes deep into the economic and social life of antiquity and may realize, too, how like, in spite of all changes, the conditions of civilized life today are to those that prevailed in ancient Greece and Rome. H. MATTINGLY.

THE BRITISH MUSEUM QUARTERLY. Vol. II, no. 2, September 1927. Sold at the Museum (each part 2s. or, including postage, 2s. 3d.; annual subscription 8s.; subscription for five year period £2). 22 pages and 17 plates.

JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE. Vol. 57. (January–June 1927); published by the R.A.I., 52 Upper Bedford Place, W.1. 248 pages and numerous illustrations.

IPEK. (Jahrbüch für prähistorische und ethnographische Kunst) edited by HERBERT KUHN and published by Klinkhardt and Biermann, Leipzig. 1927. 112 pages and numerous illustrations.

BULLETIN DE LA SOCIETE DE PREHISTOIRE DU MAROC. (Imprimerie G. Castex, Casablanca). 1st year, nos. 1 and 2. 1927. 24 pages.

We cannot attempt to review, or even to notice, all the good things that are given to the world in specialist publications. But we can, from time to time, draw attention to a few of them.

The BRITISH MUSEUM QUARTERLY is a pleasure to behold, and well maintains the fine traditions of its producers. (It is printed for the Trustees by the Oxford University Press). The present number contains the first published illustrations of last season's work at Ur (1926–7), including the gold dagger and adze-head, gaming-board, shell-plaques and carved grave-stela showing an empty chariot drawn by griffins. Dr Hall, in the accompanying text, points out that this is the oldest representation of a chariot, and that it dates to nearly 3500 B.C. As one would have expected, the wheel has no spokes, but is solid, though not made in one piece. Amongst the other objects is a 'square stamp-seal of the same design as the "Indo-Babylonian" seals found at Harappa in the Punjab, but with a cuneiform inscription, which is decisive as to the contemporary connexion of the Sumerians with India'.

The outstanding article in the JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE is Mr Harold Peake's presidential address on 'The Beginning of Civilization'. Mr Peake deals mainly with the origin of corn, but touches also on the problems of the first domestication of animals, the invention of pottery and the discovery of metal. Much fresh information is brought for the first time within the range of the general reader and the address forms a valuable companion to Dr Cecil Curwen's article in our September number (ANTIQUITY, i, 261–89). Mr van Riet Lowe's account of stone huts in the Orange Free State is a valuable study of the (recent) archaeology of Bantu remains. It is illustrated, and contains also plans and a distribution-map.

IPEK is still little known in this country and deserves fuller recognition. It is admirably produced and lavishly illustrated. The French, English, Spanish and Italian languages are admitted in addition to German. The present number contains two articles in English—one on four examples of palaeolithic art from the Creswell caves (Derbyshire) by Mr A. Leslie Armstrong; and another on the octopus in the ancient art of the Chiriqui (N. America) by Mr C. G. MacCurdy. There is a long account

(in German) of N. American drawings on skins, by Ernst Vatter. The shorter notes include one by the Editor on the recent discovery of painted pottery in China, and one by Dr Leonhard Franz on an Iron Age urn with the (human) 'triangle-figure' found in Lower Austria. There are thirteen pages of review-matter.

We extend a cordial welcome to the newly founded SOCIETY OF PREHISTORY IN MOROCCO. The land is rich in antiquities and the surface only has been scratched. A very sensible beginning has been made by publishing a list of sites in the vicinity of Casablanca itself. This preliminary survey will be continued and extended. Such a method is thoroughly sound and well adapted to a young society containing, in the Editor's words, 'plus de gens de bonne volonté que de préhistoriens avertis'. The record of fact precedes fuller interpretation of the objects found, and the excavation of sites. If we might be allowed to add to our congratulations on this excellent start a suggestion for future work, it would be that plans should be made and published of the dolmens, artificial burial-caves (*grottes*), prehistoric hill-forts and similar remains. We wish the Society a long and prosperous career.

HARMSWORTH'S 'UNIVERSAL HISTORY'. Edited by J. A. HAMMERTON and published in about 45 fortnightly parts. Nos. 1–3. Price 1s. 3d. each.

The first three parts of this new Universal History attain a high standard of excellence. The contributors are masters of their respective subjects, and write with first-hand knowledge. The illustrations are, for the most part, well-chosen and well reproduced.

The first number opens with a discussion on the use of history, by Professor G. M. Trevelyan. It is followed by 18 pages by Sir Flinders Petrie on 'The Aims and Methods of Archaeology, and its rôle in the expanding and enriching of Historical Knowledge'. Some of the professor's remarks on the early civilizations of Egypt touch on controversial subjects, which are, we venture to think, not yet ready for popular presentation.

The next section, chapter I, opens at the beginning of things with what is, in our opinion, the finest contribution that has yet been made to the subject. Dr Jeans, the Secretary of the Royal Society, needs no words of praise from archaeologists, and he is probably well known by name to readers of ANTIQUITY. His chapter deals with the same subject as his article in *Nature* (supplement, 1 March 1924), but the presentation here given is clearer than the earlier one. Dr Jeans concludes that 'if solar systems come into being at the rate of one every 6,000 million years, and if each contains ten planets suitable for life and destined ultimately to be the abode of life, then civilizations come into existence at an average rate of one every 600 million years. This gives a very large probability that our terrestrial civilization, with only 10,000 years to its credit, is the youngest in the whole colony of stars. It is likely to be the youngest in the whole of space. . . . This conclusion, from which no escape seems possible, leads to at least one reflection of practical interest. We are apt to think of ourselves as living at the end of time'. But actually, Dr Jeans suggests, we are merely at the beginning of things. 'As the youngest civilization in the sky we know least and have the most to learn. Almost endlessly the vista of future ages stretches before us in which the race, if not the individual, may learn all there is to know, and perfect itself accordingly'.

Chapters II and III give an account of life before the advent of Man. Human affairs begin to predominate in the second number, which contains contributions on the 'Evolution of Man' by Sir Arthur Keith; 'Primitive Communities and Origins of

Races ' by Professor Fleure, and ' Primitive Crafts in Peace and War ' by Dr Marett. Many of the illustrations are new, and there is a refreshing mixture of ancient and modern art which is quite as it should be if we are to understand the ancient aright.

In the third number, the illustrations of palaeolithic art predominate. Professor John Fraser gives an interesting account of the origin and importance of language ; and Professor Myres writes on the influence of climate and geography on history. Professor Elliot Smith contributes the usual remarks on ' vitality residing in red ochre ' and the ' source of life ' and ' cowrie shells', and other ' irrational beliefs about the unseen world '.

ANCIENT EGYPTIAN MATERIALS. By A. Lucas. Edward Arnold and Co. 1926. 242 pages. 7s. 6d.

This is an invaluable monograph which every archaeologist should possess. The roots of archaeology are to be found in Egypt and Mesopotamia, and any book which deals authoritatively, as this does, with the materials of which archaeological remains consist, should be studied with great care. Mr Lucas gives a chapter each to such subjects as building materials ; fine arts, glass and pottery ; metals ; and many other materials. We note that African ores were probably adequate to furnish most of the supply of ancient Egyptian gold ; that the much discussed fragment of iron from the Great Pyramid is considered by the author to deserve serious attention ; and that tin does not appear in a pure form before the 18th Dynasty, and was used, amongst other things, for imparting a white opaque colour to glass.

TWO THOLOS TOMBS AT BODIÀ, IN THE EASTERN PART OF TRIPHYLIA. By Natan Svensson. Royal Society of Humane Letters, Lund. 1927.

This is an account in English of the excavations of two Tholos tombs in the Peloponnese. Unfortunately they had both been rifled, but the plans are interesting, and a few minor remains were found. None of these date before the late Mycenaean period, and the majority of the potsherds could be definitely assigned to late Helladic III (1400–1200 B.C.). The writer concludes that tomb 2 dates shortly before 1300 B.C. and represents a late survival in an out of the way region of the civilization which produced the Treasury of Atreus and the tomb of Clytemnestra at Mycenae.

IN ROMAN SCOTLAND. By Jessie Mothersole. John Lane. 282 pages. 10s. 6d.

Miss Mothersole has already made a name for herself as a popular but accurate writer on Roman Britain. Her reputation will be increased by this little book which, without pretending to any originality or profundity of treatment, will be found invaluable to those to whom the subject is new. The treatment is not historical but geographical, and even so, it is not exhaustive. We miss, for instance, any reference to the camp at Kirkbuddo ; and the temporary camp at Little Clyde deserves more than six lines. However, there is a freshness about the book which is very attractive, and we cordially recommend it to our readers.

ESSAYS IN AEGEAN ARCHAEOLOGY. Presented to Sir Arthur Evans in honour of his 75th birthday. Edited by Stanley Casson. Oxford University Press. 1927. 15s.

It is given to few people to discover, as Sir Arthur Evans discovered more than a

quarter of a century ago, the remains of an unknown and almost unsuspected civilization. Nothing like it had happened before since the days of Schliemann and nothing like it has occurred since until Sir John Marshall's discoveries in the Indus Valley, and those of the British Museum in Lower Mesopotamia. In his preliminary remarks Dr Farnell says ' there is not a single chapter of Greek studies, not a branch of Mediterranean archaeology, that is not in some way indebted to your work '. The truth of this is apparent in the volume before us.

Professor Gordon Childe writes on ' The Minoan influence on the Danubian Bronze Age ', a subject which he has made his own. Dr H. R. Hall argues that Keftiu must represent Cretans rather than the peoples of the opposite coast of Cilicia ; and writes on a predynastic double axe of flint. Dr Hogarth suggests that the Aegean figurines which are so familiar are to be regarded rather as *ushabtis* than as representations of a nature goddess—that, in fact, they were intended to accompany the dead man into the next world. Professor Peet contributes some remarks on an Egyptian writing-board of the early 18th dynasty (as he suggests) bearing Keftiu names. Unfortunately, the results of a study of these names is mainly negative, but some day it may take its place in the decipherment of the still unknown Cretan language. Professor Sayce writes on references to Crete in Babylonian and Old Testament texts.

The book is, of course, beautifully printed.

PRIMITIVE HEARTHS IN THE PYRENEES. By Ruth Otis Sawtell and Ida Treat. Appleton and Company. 1927. 307 pages. Illustrated.

In these days when there is no end to the making of popular books on prehistory, it is pleasing to come on one that is at the same time well written and well informed. This book gives a clear and interesting account of a summer's digging in the Tuto Biouleto, or Violet Hole, at Montardit in the Ariège, culminating in the discovery of the first Azilian skeleton to be unearthed in France. The chapters which describe the excavation alternate with vivid and entertaining accounts of visits to the prehistoric painted caves of the region, and descriptions of the people and country of the Pyrenees of Ariège. Two chapters, inserted just where they are needed to make the story of the excavation comprehensible to the ordinary reader, give a clear and on the whole accurate account of the archaeology and physical anthropology of the Palaeolithic and Mesolithic periods.

The authors are to be congratulated on their fine discovery, which is soon to be described scientifically, and on having produced a delightful book. Those who do not know the caves of the Pyrenees will be able to realize something of their fascination, and those who do will rejoice to pass again in such pleasant company over ground on which they have spent so many happy hours. D. A. E. Garrod.

THE TOMB OF TUT·ANKH·AMEN, VOL. II. By Howard Carter. Cassell and Co. 1927. pp. 269 and 153 illustrations. 31s. 6d.

It is no exaggeration to say that the discovery of the tomb of Tut·ankh·Amen in an almost intact condition was the most important and popular discovery of the century. The book under review has been written to satisfy the natural craving of the public for a more detailed account of the excavation than they were able to find in the newspaper reports. It is at the same time a ' popular ' book and a detailed report for the eyes of archaeologists ; the style being not too scientific for the man in the street, nor too ' popular ' for the scientist. The more fully an archaeological report is illustrated

the better it fulfils its function; and the 153 illustrations in this book, from the excellent photographs by Mr Burton, are so good that only one criticism can be made;—it is that the book would have been improved if the plates had been inserted opposite the detailed account of the objects illustrated, instead of being lumped together at the end. But this no doubt would have considerably increased the expense.

Mr Carter sees in Egyptian art a finesse within simplicity, with the objects treated individually and without perspective—a traditional art that was essentially religious, and was copied and repeated so that it tended to suffer.

The patience, dexterity and mechanical contrivings displayed by the excavators in the dismantling of the four shrines and the three coffins that almost filled the small and simple burial chamber were rewarded by the success of their labours and the small amount of injury to the objects. Mr Carter reconstructs the furnishing of the tomb, and shows that the sections of the shrines must have been placed against the walls, the coffins set in position, the shrine erected, the partition wall built, and lastly the walls of the burial chamber decorated. He pays tribute to the craftmanship of the joiners, but shows that the undertakers were slovenly in their work. Luckily the thieves who entered the tomb did not penetrate further than the first shrine. The objects can be classified as personal and religious: some of the former had been used by the Pharaoh, while the latter had been specially made for the funeral. The fact that so many of the funerary objects must have been brought to the tomb many days after the burial suggests that there may have been a store for them near by. But possibly the funeral procession was not such a gorgeous spectacle as might be supposed from the wealth found in the tomb. From the decoration on the walls we learn that the succeeding Pharaoh acted as Sem priest during the obsequies and that the bier was drawn along by courtiers and not by oxen. Among the great number of interesting and exquisite objects carefully described none are more important than the three objects of iron, namely the head-rest, the dagger with iron blade, and the iron Uzat eye in the gold bangle. This is 'the first definite proof of the introduction of that very important metal into Egypt'. It is suggested that it was introduced by the Hittites who at a later date sent a shipment of the metal and an iron sword to Rameses.

As with men, so with archaeological books, long appendices enhance their scientific interest. A third of the text in this book is taken up with specialists' reports. Dr Derry, after describing the various processes of mummification gives as full an account as possible, under the circumstances, of the mummy. The skull was of a peculiar shape, and corresponded so closely to that of his father-in-law Akhenaten that it can be presumed that Tut·ankh·Amen married his half-sister in order to establish his eligibility to the throne. He was just over 18 years of age when he died, but there are no clues as to the cause of death. Professor Newberry made a detailed examination of the flowers in the garlands and came to the conclusion that the funeral took place between the middle of March and the end of April. A report on the chemistry of the tomb is given by Mr Lucas who states that lime was not used for any purpose before the time of the Roman occupation. One piece of lead was found. Dr Alexander Scott writes on the preservation and strengthening of the objects, and, as the result of experiment, finds that duropene dissolved in xylol is the best agent. All the textiles were of pure flax, no cotton having been used. Dr Plenderleith is responsible for appendix v.

This book will be widely read, and it is hoped that the glamour of the tomb will not distract from the commendation due to the excavators for the thoroughness of their work and the excellence of their report. R. C. C. Clay.

ANTIQUITY

THE FORMATION OF THE GREEK PEOPLE. By A. JARDÉ, Professor at the Lycée Lakanal. Translated by M. R. Dobie. Kegan Paul, Trench, Trubner and Co. 1926. pp. xvi, 359. 16s.

This book is one volume of a series edited by C. K. Ogden describing the history of civilization from prehistoric times to the present day, and also has a place in the French series *L'Evolution de l'Humanité* edited by Henri Berr. It is divided into four sections—The Country, the Peoples, Hellenic Expansion, and Hellenic Unity. Of these, the first deals mainly with geographical and climatic conditions and their relations to human work and progress. The descriptions are lucid, and the inferences for the most part sound, though there is here and there a tendency to overstatement. Thus the assertion that 'the Greek mountains were no barrier to travel' (p. 11) is true up to a certain point; but the experience of all ages has shown that a hill of 6000 to 8000 feet in height is at any rate an obstacle, if not a barrier, to free intercourse between communities living on opposite sides of it; and those who have sailed the Aegean in winter may ask for some modification of the author's statement that 'it is not a stormy sea' (p. 32).

In reviewing the current theories as to the origin of the Greek peoples, M. Jardé is reduced to scepticism. He recognizes the claims of language, archaeology and physical anthropology, as constituting bases for classification, but finds it difficult to co-ordinate them. The remaining sections of the book describe the nature and results of colonization and the spirit of Hellenism. A short summary of the decline of the City State from 431 B.C. to the establishment of the Macedonian rule concludes a book which, though it contains little that is original, is well written and constructed, and presents many of the results of recent research in a form convenient to the general reader. It should be added that the work is scholarly, the bibliography extensive, and the references to authority copious. J. F. DOBSON.

THE CAPEL GARMON CHAMBERED LONG CAIRN. By W. J. HEMP, F.S.A. Published in *Archaeologia Cambrensis*, June 1927.

This long cairn consisted of an inner wall roughly rectangular in shape with three straight sides, two horns flanking a false entrance on the east, and a concealed entrance on the south leading by a gallery to a rectangular central chamber from the east and west sides of which opened secondary chambers roughly circular in plan. The whole structure was formerly covered by a mound of stones, those at the top being larger than those at the bottom. The walls of the gallery and of the chambers were formed by upright stones with dry walling between them. The walls of the southern portion of the gallery projected inwards and formerly supported a corbelled roof, while the northern portion of the gallery and the three chambers were roofed with large covering slabs obtained from a crag immediately to the south-west of the cairn. The western chamber had once functioned as a stable and the chambers had been disturbed by former excavations, but the floor of the gallery had fortunately remained intact. Five fragments of beaker pottery representing two different vessels and a fragment of plain dark coarse pottery with thickened and slightly flattened rim were discovered on the original floor of the northern portion of the gallery. This northern end widened out and contained, besides the pottery, a post hole and an area of burning on the natural clay soil. This place, Mr Hemp suggests, may have corresponded with an antechamber which is usually situated between the horns, but

in this instance the area between the horns was occupied by the material of the mound. The dry-walling was made secure by the lower courses being tightly wedged between stone pegs driven into the soil diagonally under the foundations, and the inner wall was prevented from spreading by stones driven into the ground at a raking angle. All the uprights were embedded in the natural clay and wedged with small stones.

Dr Fox describes the pottery and suggests that the beaker fragments dated from the middle of the beaker period since their situation was far removed from the areas first occupied by the beaker-folk. An impressed oval ornament on one fragment suggests the 'maggot' pattern. Reference is made to the finding of beaker pottery in the megalithic structures at West Kennet and Tinkins Wood, St. Nicholas, Glamorgan. Beakers, however, have frequently been found associated with true so-called Neolithic pottery, and reference may be made to Peterborough, Christchurch, Windmill Hill, Rowberrow Cavern, Sun Hole and Chelm's Combe in the Mendips, Gullane Bay, and Mortlake where the beaker pottery was sealed under the same clayey stratum as the famous bowl. There is necessarily an overlap between any two contiguous cultures, but the pre-beaker reign of the so-called Neolithic pottery cannot have been very long. R. C. C. Clay.

DEMOCRACY IN THE ANCIENT WORLD. By T. R. Glover. Cambridge University Press. 1927. pp. 263. 10s. 6d.

Mr Glover, while not professing to be a historian, has succeeded in presenting much useful historical information in an acceptable form. He has set himself the task of tracing the history of democracy from the sowing of the seed in Homeric times to its complete eradication under the early Roman Empire. We learn from the introduction that the first four chapters were lectures given at the Rice Institute, Houston, Texas; so that the original scope of the work was limited to the rise and fall of democracy in Greece. The remaining chapters, which form the larger portion of the book, retain the form and style of lectures, and, though to some extent each is complete in itself fit on naturally one to another. The early chapters are perhaps the most interesting; they are discursive, but not excessively so. We listen to the murmurs of Thersites and his successors, and Mr Glover explains their origin and their tendency. He lays stress on economic considerations, and makes his readers realize very fully how the spectre of famine was a constant menace before the eyes of ancient communities. Chapters on the Homeric World and the World after Homer lead up to the Periclean Age, where we have the 'miracle' of an assembly governing an empire, a state of things which was only possible under exceptional circumstances, and has never been repeated. With the downfall of the Athenian Empire we have the decline of democracy and throughout the rest of the book we are chasing a bird on the wing. Democratic ideals, it is true, had not perished, and the Achaean League, which made the first serious attempt at federal democracy, was at any rate a noble failure; but Greek liberty was under Alexander and his successors a pious fraud, and under the Romans a specious mockery. Either the spirit or the fortune of Rome was adverse to democracy and though we find the same struggle for popular freedom in Italy as in Greece, its ideals are never realized. The passing of the *Lex Hortensia* in 287 B.C., sometimes hailed as the 'final triumph of democracy', actually marks the beginning of the ascendancy of the Senate; and the final overthrow of senatorial oligarchy led only to the establishment of the Empire. Where, then, is democracy to be found? Only,

it would seem, at Athens in the time of Pericles ; and we must not forget that even that constitution was regarded by a contemporary historian as actually the sovereignty of one leading man. J. F. Dobson.

THE CULTURE OF THE BABYLONIANS. By Leon Legrain. University Museum, Philadelphia. 1925. 2v. [London Agents : Bernard Quaritch]. 63s.

ROYAL INSCRIPTIONS AND FRAGMENTS FROM NIPPUR AND BABYLON. By Leon Legrain. University Museum, Philadelphia. 1926. [London Agents : Bernard Quaritch]. 21s.

These three volumes are a credit alike to both author and University Museum. In both matter and form they are of the highest order. The Babylonian and Persian seals, nearly eleven hundred in number, which are preserved in the University Museum of Philadelphia have been exhaustively catalogued, classified and explained by Dr Legrain, and his work in conjunction with Dr Contenau's equally exhaustive work on the seals in the Louvre and other collections in Paris has laid the foundation of the scientific study of a new branch of research. The seals are mainly Babylonian, many of them going back to Sumerian times ; but there are also a good many which belong to the so-called Syrian class and have their origin in Mesopotamia.

The cylindrical seal was of Babylonian invention. The alluvial plain of Babylonia was devoid of stone ; every pebble, therefore, was precious and the writing material was naturally clay. The use of a rounded pebble, accordingly, which could be rolled over the clay was an obvious way of imprinting a name or design upon it. As I have long since insisted, the employment of the seal-cylinder, like that of clay as a writing material, is a proof of Babylonian influence, and consequently its existence among the early Egyptians must indicate connexion with the culture of Babylonia.

Dr Legrain's introduction is full of valuable material. In his chapter on early Sumerian religion he has much that is new and convincing, more especially in connexion with what must have been the forms and signification of the primitive pictographic signs out of which the cursive cuneiform developed. His explanation of the ideographs which denoted the various cities of Sumerian Babylonia is enlightening. Thus he points out that 'Erech' was represented by a 'large abode of mud and reeds', while 'Ur is the same enclosure but with a great buckled lance, *urigallu*, planted on the terrace, in honour of Nannar, the god of the New Moon'. In the case of Larsa a picture of the sun-disk took the place of that of a lance. The emblem of Eridu was a great pole ; that was also the emblem of Sippara combined with the sign of crossed roads. Elam, 'the high-lands', had a mountain pine as its symbol. Doubtless the heart of the city, as Dr Legrain says, was where the pole stood with its divine emblem. In early Sumer, as in Asia Minor, the emblem on the sacred pole was the object of worship ; anthropomorphic imagery was introduced by the Semites.

The two volumes are provided with an excellent index. I have noticed very few misprints and but little to question in Dr Legrain's statements. His 'Hittite characters,' however, are non-existent, excepting possibly in no. 498 ; those in no. 499 have a faint resemblance to Cypriote letters, while no. 1032 is Gnostic.

The third volume is a welcome addition to our knowledge of early Babylonian history. Apart from a long inscription of Nebuchadnezzar which is published in full for the first time, it consists of 'gleanings' in the shape of early inscriptions or fragments

which have escaped notice in previous publications of the Museum texts. The most important of these are inscriptions of Sargon of Akkad and his later successor Rimus which complete the annalistic records of those kings. There are two misprints in the ninth column of the text; 'with Nagurzam' should be 'in Nagurzam', the name of a place, and 'Yarmuli' is printed instead of Yarmuti. Yarmuti is probably the Yarimuta of the Tel el-Amarna letters, the name of which seems to be preserved in that of Armuthia south of Killiz. The whole of the passage in which Yarmuti is mentioned is historically important. Sargon states that he had 'won 34 battles and destroyed the fortresses as far as the front of the sea. The ships of Melukhkha, of Magan and of Dilmun he collected before the city of Akkad; in Tutuli (the modern Hit) he paid worship to the god Dagon (who) gave him the Upper Country: Mari, Yarmuti and Ibla, as far as the Cedar-forest (of the Amanus) and the Silver mountains'. Mari was near Dêr ez-Zor and the Silver mountains must be the Ala-Dagh, where at Bereketli Maden there are extensive remains of ancient silver mines. Sir W. Ramsay tells me that as late as the eighties he found work still going on there. A little to the east, at Farash, perhaps the Barsakhanda or Burus-khatim ('Burus of Silver') of the Sargonic, Hittite and Cappadocian tablets, old iron mines have also been discovered. The deposits of Bereketli Maden appear to have been the richest in Asia Minor. The occupation of the country by Sargon and his successors opened both the silver and the copper mines of the Taurus to the Babylonian firms, and the Cappadocian cuneiform tablets which belong to the age of the third dynasty of Ur (2300 B.C.) show that they took full advantage of it. But the fact that *Khatti* was the Hittite word for 'silver' would imply that the Hittites had been the first to make the existence of these silver mines known to the Oriental world.

A. H. SAYCE.

LES TABLETTES DE KERKOUK ET LES ORIGINES DE LA CIVILISATION ASSYRIENNE. By G. CONTENAU. Geuthner, Paris. 1926.

The amount of solid work and research which Dr Contenau manages to accomplish is amazing. His range of subject is large and he is always 'up-to-date'. His monograph on the newly discovered tablets of Kerkûk is not only a valuable contribution to Assyriology; it is also of considerable interest to all those who occupy themselves with the earlier history of the East.

Kerkûk is the capital of one of the districts in the province of Mosul on the eastern bank of the Tigris and owes its importance to its position at the intersection of the high-roads to Hamadan and Bagdad as well as to its proximity to the oil-springs which, as recent excavations have shown, were utilized as far back as the neolithic epoch. Its ancient name, as we now know, was Arapkha, the capital of the classical Arrapakhitis.

Most of the tablets belong to the 14th century B.C. At that time the country had become a dependency of Assyria, and the upper classes had adopted the Semitic language of the ruling state, at all events for literary purposes. But their names continued, with few exceptions, to be native.

The names show relationship to those of Mitannian Mesopotamia as well as to those of the founders of Assur, the future capital of Assyria, and are linked on to names characteristic of northern Syria and south-eastern Asia Minor. We are now beginning to know something about the earlier history of the Mesopotamian regions and the rise of the Assyrian power. Assyria, as Dr Contenau points out, consisted of various elements, in which the Semitic was the latest and perhaps ethnologically the least.

Originally dialects allied to the Mitannian of northern Mesopotamia were spoken on both sides of the Tigris and even of the Euphrates ; Gutium or Kurdistan was included in the Mitannian zone, and Aleppo was a Mitannian principality.

The Sumerians of Babylonia gave the zone the name of Subari, 'the Upper Country' or 'Plateau', in contradistinction to Nimma, the Semitic Elamu or 'Highlands'. Kerkûk, Assyria, Mesopotamia, north-western Syria, all alike were included in Subari, which in the lexical tablets where Subarian words are interpreted is represented by the abbreviation *Su*. Somewhere about 3000 B.C. the Semites occupied a large portion of the territory, establishing a military government at Assur and introducing as a literary language the Semitic dialect of Babylonia along with the Babylonian script. The colloquial Semitic dialect of Assyria remained to the end distinct from the Semitic language of Babylonia, though as time went on it naturally tended to become more and more like the language of the schools.

Before the time of Sargon of Akkad (2750 B.C.) Semitic, Assyrian and Babylonian traders had made their way to the banks of the Halys in Cappadocia, Semitic colonies were established there and Babylonian firms worked the silver and copper mines of the Taurus. As the centuries progressed the Semitisation of Western Asia become complete ; in Babylonia Sumerian had long been superseded by Semitic Babylonian, and eventually the Semitic language of Assyria dominated the whole of Subari.

Dr Contenau's book is richly illustrated, and the pages of it devoted to a comparison of the designs on the Kerkûk seal-cylinders with those on the seals of Cappadocia and northern Syria are very illuminating. There is no higher authority on the subject than himself, and we can therefore accept his conclusions which derive the art of Kerkûk from that of Cappadocia, Cappadocian art being itself derived from Babylonia about 2500 B.C., while the art of the Kerkûk seals leads on to that of Assyria about 1500 B.C. Babylonian and Hittite glyphic art, on the other hand, are each of them independently derived from Sumer. But it must be remembered that the art of the Sumerian seals was itself largely affected by that of northern Syria, which together with the art of Sumer can be traced back to Susa.

Dr Contenau tells us (p. 11) that the people of Sumer were brachycephalic (short-headed) with long noses. That is certainly the conclusion we should draw from their statuary. But the examination by Sir Arthur Keith of the skulls found in the early cemeteries of Ur has proved that it must be, at any rate, modified. The noses are long, it is true, but so far from being brachycephalic the skulls are highly dolicocephalic (long-headed), those of the earliest period being remarkably so. While 'in width of head the people who were living in Ur early in the second millennium B.C. resembled Egyptians and Panjâbis (they) differed in this respect from the wider-headed people who were buried at El-'Ubaid early in the fourth millennium B.C.' Even so, however, 'their affinities were with the peoples of the Caucasian or European type', as well as with 'the Neolithic people of the English long barrows'. 'If they were living today we should call them Arabs' (*Ur Excavations*, I, 240)*.

A. H. SAYCE.

IMHOTEP, THE VIZIER AND PHYSICIAN OF KING ZOSER AND AFTERWARDS THE EGYPTIAN GOD OF MEDICINE. By JAMIESON B. HURRY. Oxford University Press. 1926. pp. 134. 7s. 6d.

Dr Hurry's book on Imhotep is a model of what such a monograph should be.

* See also the review of this book on p. 492 where the date here mentioned is discussed.—ED.

It is complete, well-illustrated, clear in style and 'up-to-date'. Unfortunately there is not much to be said about Imhotep himself; even his tomb is unknown, and his medical works have perished. But on the architectural side he has left an enduring monument of himself at Saqqara where the recent sensational discoveries of Mr Firth have brought to light the most amazing monument of architecture in the whole land of Egypt. Instead of its marking the beginning of stone building it must have come at the end of long centuries of development, like the script which accompanies it and which is already as fully developed as it was in the age of the twelfth dynasty. Indeed the forms of the hieroglyphs found on the base of the statue of Zoser, where the king places his chief architect almost on a footing of equality with himself, like the forms modelled in gold and inlaid in the canopy of the mother of Kheops, are to my eyes the most beautiful ever executed except perhaps in the twelfth dynasty period.

But it is with Imhotep as the physician and not as the architect that Dr Hurry is chiefly interested. His fifth chapter on Ancient Egyptian Medicine will probably be a surprise to a good many of his readers. The medical papyri which have been recovered show that even at an early date medical practice was wonderfully advanced, while on the surgical side 'there was an accurate knowledge of the skeleton and of the method of treating fractures successfully'. 'At least 15 distinct diseases of the abdomen, 11 of the bladder, 10 of the rectum and anus, 29 of the eyes, 6 of the ears, 18 of the skin were diagnosed and treated on definite principles'. Doubtless a good many magical formulae were mixed with the recipes, but modern medicine is not altogether free from such curative adjuncts, which, indeed, as shown by the cures at holy wells and the like, are often productive of more benefit than the whole pharmacopoeia of scientific medicine. It is interesting, by the way, to learn that 'from the mythological fight between Horus and Set, in which Horus lost an eye, is derived the sign which still figures at the head of our present-day medical prescriptions, and which in its original form resembled a human eye'.

The story of the seven years' famine in the reign of Zoser recorded on the rocks of Sehêl as well as the story of Nechantis recounted by Dr Hurry must be regarded as forgeries of the Graeco-Roman period, when attempts were made by the priesthoods to secure endowments in land from the government on the ground that they had been given to them in the earliest days of the monarchy. The stories reflect theological conceptions and relations between the priesthoods and the king which had no existence in the time of the Old Empire and belong essentially to the Ptolemaic epoch. Imhotep, like Amenophis the son of Apis, did not become a god until the period when a belief in apotheosis had been introduced into Egypt by Lydian mercenaries from Asia Minor and the conquest of the country by the Assyrio-Babylonians in the seventh century B.C. It is possible that in the case of Imhotep his transformation into a deity was assisted by the destruction of the chief monument which was attributed to him as a man. The *graffiti* left by visitors on the walls of his buildings at Saqqara cease with the end of the Saitic dynasty and it would therefore appear that they formed one of the temples which according to Herodotus were destroyed by Cambyses after his conquest of Egypt.

A. H. Sayce.

PREHISTORIC MAN. By Keith Henderson. Chatto and Windus. 1927. pp. 267, illustrations. 7s. 6d.

To accompany the author and his 'group of eminent Professors' on their journey of two hundred and sixty-seven pages tends to produce a weariness long before its end

is reached. The material of the book is sound enough, but it is badly co-ordinated; and written in a flippant manner which is not in harmony with the subject. The author should, at least, have ensured a measure of praise for the illustrations which accompany the text, but if the figures on pages 15, 44, 95, and 205, together with their explanatory letterpress, are to be taken as characteristic examples, then clearly even such praise will not be forthcoming. It is to be hoped that when next Mr Keith Henderson tackles the task of writing a popular book upon Prehistory he will do so in a less light-hearted fashion. J. P. T. BURCHELL.

GRIECHISCHE DOLCH- UND SCHWERTFORMEN. EIN BEITRAG ZUR CHRONOLOGIE DER EUROPAISCHEN BRONZEZEIT. Von A. E. REMOUCHAMPS. E. J. Brill, Leiden. 1926. pp. 56, illustrations.

The author of this dissertation (presented at the University of Freiburg) observes in his introduction that the exclusively typological method in prehistoric research, while practicable for determining a scheme of relative chronology, is not sufficiently accurate for fixing absolute dates, and cites the different figures, ranging from 1800 to 800 B.C., suggested by authorities for the bronze leaf-shaped sword (Naue II) in Europe. He claims to bring the evidence of new methods to bear upon the problem.

The bulk of the book is concerned with descriptions and illustrations of daggers and swords, mostly of bronze, found in Greece and the Eastern Mediterranean. Types 1 to 6 include the Cypriote and Minoan daggers. In section II (types 7 to 11) are treated the Mycaenean swords until the appearance of the leaf-shaped sword, which is found, from the geometric period, of iron as well as of bronze, and remained in use to play an important part in Greek life down to the middle of the 6th century B.C. This statement is made on the strength of research published in the third section of the book, where illustrations are given, taken mostly from Greek vases, of swords which are placed in types 12 to 18. Details such as the sheaths and pommels of swords, and the manner in which they were worn and used, can often be learnt from such illustrations. Type 13, with solid haft, is referred to the 7th-6th centuries B.C. and is similar to a type common in the late Hungarian Bronze Age, the accepted dates for which, the author suggests, are much too high. Type 14, which is compared with the Mörigen or Rhône type of French archaeologists, first makes its appearance in Greek lands, or at least in the vase decorations, at the end of the 6th century B.C. Type 17 is the well known classical *machaira*.

In the recapitulation the origin of type 11 (Naue II) is discussed. One is surprised to find Asia Minor claimed as the 'Ursprungsland'. Though no examples from this region appear to be known the sword type is recognized—but the identification is very doubtful—from a hilt on a stele of the Hittite god Tesub (fig. 69) dating from the 10th century. From this it is argued that the sword originated either in the Hittite territory or in a neighbouring region! The period of the European Bronze Age in which this type 11 is found is fixed at the 13th century. This scarcely affects the dates given by Peake for his type D, to which the Egyptian swords of the time of Seti II belong: viz. 1300–1175 B.C. The case is different, however, with the date proposed for the Mörigen swords and for the beginning of the Hallstatt period (6th century B.C.) Evidence from western Europe for a long period of transition from bronze to iron is accumulating, but this concerns the continued use of bronze rather than the tardy introduction of iron. The proof of later dates for the Hallstatt culture is not to be found in the book under review, for the identification on which the whole argument is based is questionable. ESTYN EVANS.

REVIEWS

EXCAVATIONS IN THE CABURN, NEAR LEWES. By Eliot Curwen, M.B., F.S.A. and E. Cecil Curwen, M.B. Published in the *Sussex Archaeological Collections*, vol. 68. (1927).

The thorough examination of dwelling sites furnishes us with the bricks with which to rebuild the life of prehistoric peoples. In this respect dwelling sites are always of more importance than burial places. The Doctors Curwen have given us a clear and lucid report on the excavation of a fortified settlement at the close of the early Iron Age.

General Pitt Rivers opened 40 pits in 1877-8, and the remaining 99 were excavated by Doctors Eliot and Cecil Curwen at the end of 1925. The pits were mostly rectangular in shape although the soil was chalk. In this material it is usual to find them circular, and rectangular or triangular only in rocky soil as at Worlebury. The Caburn pits differed from the earlier pits at Fifield Bavant and Swallowcliffe by being on the average of smaller dimensions, by being narrower at the bottoms than at the tops, and by having no ramps or steps. The iron implements found at The Caburn included a sword of La Tène II type, sickle, bill-hook, hammer, plough-share and latch-lifter, and some iron slag was found. Among the bronze objects were a split ring of adjustable size and a fibula of late first century type. A lead disc, probably a weight, an eyed bead of blue glass and a barrel-shaped bead of baked clay were found. Spindle-whorls were scarce, and there was only one sling bullet of baked clay, but beach pebbles were evidently used as sling-bullets. A weaving comb, a cheek-piece, and 43 loom-weights were discovered. The querns were apparently of the saddle type. Clay daub with the marks of wattle was found. The scarcity of pot-boilers is remarkable.

Before noticing the pottery, it is well to pause and praise the really excellent drawings by Mr Robert Gurd. Photographs of pottery are never quite satisfactory, and line illustrations depict only certain features, but Mr Gurd's drawings give us the best points of each, and also enable us to appreciate the actual texture. On the whole the pottery belongs to the periods of La Tène III and IV. Much of it resembles that from Glastonbury. Belgic and cordoned ware were found. It is remarkable however that only one bead rim was discovered, but the scarcity of flat-topped rims was to be expected. The solitary omphaloid base is further evidence that this feature disappeared during La Tène III. There were seven bases with cruciform designs scratched on their outsides after baking. R. C. C. Clay.

PRIMITIVE CULTURE IN ITALY. By H. J. Rose. Methuen. 1926. pp. 233. 7s. 6d.

Books, like many other things, may be divided into the good, bad and indifferent. This book falls into the first and smallest category. It will appeal to three classes of readers, the classical scholar or historian, the anthropologist, and the general reader. The student of classical antiquity will find in it the origins of familiar things, the anthropologist will find in it the development and result of familiar things, while for the general reader it will afford an explanation of many hitherto incomprehensible customs.

Sir James Frazer and Miss Jane Harrison, among others, have shown what can be accomplished when the scholar and anthropologist are united in one person, but their example is all too seldom followed. Professor Rose opens his book with an elementary chapter on primitive customs and modes of thought, and then proceeds to show how

the normal primitive customs of the Latin peoples, modified from contact with other folk such as the Etruscans and Greeks, developed or degenerated into the ceremonies and customs which hedged in the daily life of the Romans in classical times. His knowledge of Latin literature and history has enabled him to pick out the examples needed to illustrate his points from varied sources, while the comparatively small size of the book has to a great extent prevented that repetition of similar facts which, while adding to its scientific value, detracts from the readability of many books on human customs.

The whole of Europe, not to mention Africa and Asia, owes so much to the civilization handed on by the Romans that their own habits and origins must always be of interest to a large class of people. Be the fate of the classics what it may, no historian of medieval or even of modern times can escape from Rome, while allusions to the usages and customs of that ruling race confront us in our own literature and even in our daily lives, so that a full explanation of such institutions as the Vestals or the Paterfamilias is of great interest. Beside being a fit companion to Professor Rose's earlier work on Greek culture, this book will be a useful and stimulating addition to any library.

In the next edition the word *approbrium* on page 216 will doubtless be corrected. The habit of deferring what should be footnotes to the end of the chapter and of not even giving the page on which the note can be found, is most irritating.

D. P. DOBSON.

THE PULSE OF PROGRESS : including a sketch of Jewish history. By ELLSWORTH HUNTINGTON. With a chapter on climatic changes, by G. C. SIMPSON. Scribners. 1926. pp. viii, 341. 21s.

The name of Professor Ellsworth Huntington is associated with two important ideas, which he has done more than anyone else to demonstrate and to broadcast. The first of these is that during the historical period there has been neither a dead level of uniform climate nor a progressive change in any one direction, but a series of climatic fluctuations, so that large parts of the world have been now drier, now wetter, than they are at present. The second idea is that the level of human health and efficiency, and therefore the level of civilization, depend to a very large extent on the climatic environment. The combination of these two principles leads to the result that the history of civilization in any country can be in large measure accounted for as a history of its climatic changes. In the present volume Huntington combines this climatic factor in history with another, the influence of environment upon selection. Thus in a chapter on 'The Sifting Power of Cities', which provides much food for thought, he shows how the ablest individuals are attracted to the large cities, where they tend to die out. The opposite extreme is represented by the nomads of the arid regions, who are exposed to a peculiarly rigorous selection which only the hardiest individuals can survive. Nomads are highly susceptible to small changes of rainfall, a period of drought causing great migrations leading to the conquest of the more settled and civilized regions, and a large part of history is made up of such migrations and conquests.

The best available record of climatic changes is given by the annual rings of growth of the Sequoias of California. It has been found that after allowance for age and other factors, the width of these rings is proportional to the rainfall, and as some

of them are more than three thousand years old, they provide a unique record of climatic changes. Moreover in recent years, for which we have rainfall records, there is a sufficient similarity between fluctuations of rainfall in California and in the Mediterranean to permit the use of the curve of tree growth in the former as a standard of rainfall variation for the latter also. The outstanding fluctuations shown by the curve are a prolonged maximum of rainfall from 1200 to 200 B.C. and minima in the 13th century B.C. and the 7th, 8th, 13th and 15th centuries A.D.

The most striking part of the book deals with the author's interpretation of history. The example chosen for detailed discussion is the history of the Jews, and the interaction of climatic changes, contact with other peoples, wars, migrations ; and the survival of the fittest is analysed in a series of brilliant but at times perhaps too imaginative chapters—' The origin of a great race ', ' The purging of the Hebrews ', ' The isolation of Judea ', ' The biological antecedents of Jesus ' and ' The dispersal of the Jews '. As history the book is unorthodox, and the argument runs on so smoothly, and the gaps in our knowledge are filled in so plausibly that the reader may be carried on from knowledge to reasonable inference, and from inference sometimes to speculation without realizing just when he passes the frontiers. An example is the treatment of inbreeding, which is usually considered to lead to degeneration, but Huntington argues very strongly that among families of high attainment, the reverse is the case, inbreeding preserving the high qualities of the race.

C. E. P. Brooks.

RACE AND HISTORY. By E. Pittard. Second edition. History of Civilization series. Kegan Paul, Trench, Trubner and Co. 1927. 21s.

This is a fair translation of the French work by Professor Pittard of Geneva, and one regrets that advantage was not taken of the second edition to correct some misspellings such as ' peninsular ' used as a substantive, and to put into English form some sentences very literally translated. There is however no difficulty in following Professor Pittard's meaning and for that one may express gratitude.

There is little doubt that, could we but attain to real knowledge of the make-up of men, we should find a considerable correlation between physique and mental attributes, and this gives a perennial interest to the subject of Race and History. Professor Pittard is well known for his investigations and wide reading, and it is regrettable therefore that, in this book, he has given rather a hasty collection of notes than a deep study of the great questions involved. Here and there he gives suggestions that the specialist may ponder, and he criticizes rather pointedly the worship of the Nordic Race fashionable in certain quarters.

After a discussion of classification of races, the populations of the various continents are treated *seriatim* and, under Europe, separate chapters are given to countries or groups of countries. A bibliography of 300 works includes only a small sprinkling of contributions to the subject made since 1914 and the archaeological side is weakly represented, but a number of references to the work of the last few years are added as footnotes, several through the admirable enterprise of the translator. It is much to be wished that Professor Pittard had utilized the fine book by Professor Childe in the same series, or some corresponding study in order to give his thoughts their proper archaeological framework. Meditation upon Professor Vidal de la Blache's map of western Europe in his ' Tableau de la geographie de la France ' would also have helped

very greatly. A long section on the Jews reaches conclusions that seem of value, but one only wishes that Professor Pittard's experience had been used to evaluate interesting suggestions made public during the last ten years by Dr Redclyffe Salaman. The book does its best to smash a number of popular errors, and, on this critical side, it certainly does public service, as when it castigates us for our treatment of the natives of the Pacific. H. J. FLEURE.

THE HISTORICAL GEOGRAPHY OF EARLY IRELAND. By WALTER FITZGERALD, M.A., F. R. MET. SOC. *The Geographical Teacher*, Supplement no. 1. George Philip and Son. [1926]. pp. 100, 28 maps and illus. 5s.

A study of the Historical Geography—that is to say, in the words of Prof. Roxby's introduction to the work before us, 'the evolution of man's relations to his physical environment'—of Ireland has long been needed, and this brochure of 100 pages is an attempt to fill the gap. Short though it is, it covers a wide expanse of scientific territory: too wide, perhaps, for its narrow limits, for the compression which its form compels makes it by no means easy reading. It deserves to be set forth in the more attractive form of a bound volume, secured otherwise than by inconvenient wire clips. Apart from these matters of external detail, the work is deserving of commendation as a well-considered treatise on a subject of no small complexity. In the first chapter, which is illustrated with well designed and selected maps, the regional divisions of the country are described with reference to climate, vegetation, degree of isolation, surface profile, and geological formation; the influence which these various elements of variation must necessarily have upon the distribution and well-being of a human population are set forth. In the following chapters, four in number, the effects of these physical constituents are traced in the distribution of various types of archaeological remains. We begin in chapter II with the Ice Age, during which there is no evidence of human occupation. We are not quite sure that Mr Fitzgerald is correct in tracing the dwellers on the raised beach at Larne to an immigration from the Mull of Cantire: the archaeological evidence is rather in favour of a colonization from the continent. The very instructive distribution of dolmens in the country receives due consideration, though we think the author would have been well advised to avoid 'Fir Bolg' as a specific ethnical appellation. A chapter on the Bronze Age follows in which due weight is given to the Irish initiative in European civilization, championed by Mr O. G. S. Crawford and, more recently, by the late Dr Walther Bremer. The importance of the gold trade is emphasized; but the author should have provided better illustrations of gold ornaments than those on p. 70. The Clonmacnois collar there figured is moreover La Tène, not Bronze Age. Especially good is the short chapter which follows, on the Celtic period: maps trace the internal routes, the areas of Irish colonization, the wanderings of Celtic missionaries. Finally comes a chapter on the Scandinavian settlements, which is a very useful contribution to the study of a phase of history of no little obscurity. In conclusion we repeat our hope that the author will at some time expand his treatise into a full-dress book: it is worth it. Perhaps in doing so he will see his way to deleting that offensive and inaccurate word 'tribal' in referring to the pre-Norman population-divisions.

R. A. S. MACALISTER.

REVIEWS

APES AND MEN. By HAROLD PEAKE and HERBERT JOHN FLEURE. Oxford : The Clarendon Press. 1927. pp. vi, 138. 5s.

HUNTERS AND ARTISTS. By HAROLD PEAKE and HERBERT JOHN FLEURE. Oxford : The Clarendon Press. 1927. pp. vi, 154. 5s.

These two works, the first two of a projected series of four to be known as *The Corridors of Time*, deal with the development of Man. The aim of the series, as stated in the preface to the first volume, is to review the more general aspects of the detailed studies of anthropologists, geographers, archaeologists, and historians, with a view to correlation of their work. The close connexion between geographical and climatic conditions on the one hand, and the evolution and development of Man on the other, is very successfully indicated.

The first of these books consists in part of a series of short introductions to various branches of study necessary for an adequate appreciation of the main subject. An introductory chapter, recounting some primitive explanations of Man's origin, is followed by an 'Introduction to the Earth's Story', with an account of mountain-building processes, including reference to the work of Wegener, Joly, Suess, and others. The classification of periods here adopted places the Pleistocene and Holocene in the Tertiary era ; this arrangement, and an inference that a classification including a Quaternary era, used by 'older geologists', is now obsolete, will scarcely pass unchallenged. 'A Glimpse of the Evolutionary Process', an excellent review of the modern attitude towards evolution, and an account of present-day ideas on the descent of Man, complete the introductory studies.

Chapters on the Ice Age, on lower palaeolithic implements, and on the known fossil remains of earliest Man considered to have been contemporary with the Ice Age, in effect complete the book, the final chapter being a chronological summary which rather labours points already driven home ; of the subject matter of this summary much is unnecessary, and part rightfully belongs to previous pages.

The second work reviewed opens with a description of the retreat of the ice from Europe, and of the geographical and climatic changes accompanying the retreat ; complementary chapters on upper palaeolithic man, his industries and his art, and chapters on mesolithic man occupy the latter part of the volume. The final chapter is a summary similar in form to that in *Apes and Men*. Catalogues of the better known skulls and skeletons of upper palaeolithic age and of mesolithic age are given in appendix form.

In these volumes the authors have produced an exceedingly interesting and dignified narrative, without the irregularities often attendant on a collaboration. Their work will be of great value, both as an epitome of present knowledge, and as a guide to new lines of thought, to all who are interested in the processes by which Man has arrived at his present state : it is, however, a little unfortunate that the speculative nature of some sections of the books, particularly of many of the correlations shewn in the various charts, is not more strongly stressed. Each volume has an index, and an extremely valuable feature is the inclusion at the end of each chapter of a list of authoritative books for fuller study.

Both volumes are very fully illustrated, and beautifully printed.

F. H. EDMUNDS.

THE EVOLUTION OF THE ENGLISH FARM. By M. E. Seebohm, F. R. Hist. Soc. George Allen and Unwin, Ltd. 1927. pp. 364, with bibliography and index, and 70 figs. 16s.

This is a work of the first importance to all students of social and economic history. It is a veritable encyclopaedia of information relating to that all-important industry of our forefathers—agriculture and stock-breeding—in all its stages from the Stone Age to the present day, including a history of the development of the farmer's house and implements. But it is more than a catalogue of facts and figures ; clear explanations are given of the way in which changes came about, and of the causes which led to these changes. Moreover, the book is copiously illustrated from contemporary and other sources, and well provided with footnote references and a bibliography.

The value of all this is enormously increased by the eminently readable style in which the authoress has so admirably succeeded in expressing herself. She exhibits just that delicate touch of dry humour, expressed in the selection of a word or a phrase, which makes tedium impossible, and the picture of the times she is describing is thrown into vivid relief by apt quotations from quaint old writers. The reader is made to feel at home on the very first page of the book, where he is introduced to the homeliness of the English farmyard, and is told—'All this should you love, the sights, sounds and smells—particularly the warm and comfortable smell of the cow-byre—if you are to take pleasure in what is written here.' It is quite in keeping with this spirit of homeliness that we are told later on that according to a contemporary writer the tom-cat of Norman times 'maketh a ruthful noise and a ghastful when one proffereth to fight with another '.

One very happy feature of the book is the clear and concise account given of the English manorial system in its various stages and with its complicated machinery—an account free from unnecessary technicalities and extremely simple to follow. This book is, too, one of the first to attempt to collate the evidence relating to the agriculture of the prehistoric periods, and this the authoress does very successfully on the whole, though one is bound to say that one would have liked to see the early Iron Age treated along other lines. The attempt is made to deduce from the tenth century Welsh laws a picture of the agricultural economy of the Britons of the last five centuries before Christ, entirely overlooking the evidence obtained by Crawford and others regarding the prehistoric Celtic field-system, and also neglecting the possibilities of change and improvement that must assuredly have occurred during the ten to fifteen centuries that elapsed before Howel Dda codified his laws. To what extent were the customs of Howel's time influenced by those of the neighbouring English ? In our opinion the use of the eight-ox plough team in Wales and elsewhere was almost certainly derived from the Saxons. In the next edition we should like to see this chapter on the early Iron Age very largely re-written.

But these defects are small in comparison with the value of the book as a whole.

E. Cecil Curwen.

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